LSU HEALTH SYSTEM
HEALTH CARE SERVICES DIVISION
INTERIM LSU PUBLIC HOSPITAL
Level 1 Trauma Center

Interim LSU Public Hospital
Financial and Operational Assessment

March 23, 2009

ALVAREZ & MARSAL

Dear Dr. Cerise:

The Louisiana State University and Agricultural and Mechanical College ("LSU") and the Board of Supervisors of LSU should be commended for its willingness to take a hard look at the Interim LSU Public Hospital's ("Hospital") finances and operations. With today's challenges of changing reimbursements, State of Louisiana budget constraints, and planning for a new facility, this Assessment is an aggressive step toward ensuring that the Hospital remains an important asset to the New Orleans community for years to come.

The attached Assessment details the findings that Alvarez & Marsal has reached as a result of our analysis of the Hospital's finances and operations. I would like to outline, here, just a few of the highlights:

- ▲ Salaries and benefits currently account for 40 percent of the Hospital's overall operating expenses, yet there is not a system in place to accurately monitor the efficiency and productivity of its workforce.
- ▲ Materials Management must be restructured as it lacks efficiency in procurement and the delivery of supplies throughout the organization.
- ▲ The LSU and Tulane Graduate Medical Education ("GME") programs help the Hospital meet its mission of training future healthcare professionals, but the costs of the program burden the Hospital's operating budget because of limited reimbursements.
- ▲ Outpatient Clinic Services ('OCS") are decentralized and hampered by inefficient workflow processes and throughput issues that impact its ability to provide the best access to primary care for the community.
- ▲ Peri-Operative Services is underutilized and has the potential for additional cases with a more effective throughput process and additional hours of coverage.
- ▲ Nursing Services are poorly structured and has the potential to be changed without impacting direct patient care.
- ▲ Investment in a Decision Support System is critical and would provide the Hospital's Administrative and Department Director leadership with accurate, consistent, and real time data to make informed decisions.

The Hospital has a more than 250 year heritage of serving the New Orleans community. To continue this heritage into the foreseeable future, the Hospital must accept the challenge of better positioning itself to handle the budgetary and reimbursement constraints that it is currently facing. While implementing the

recommendations contained in this Assessment will not be easy, the Hospital should rely on the dedicated and committed employees that have risen to previous challenges. I am confident that the Hospital will meet its challenges and continue to thrive in the New Orleans community for years to come.

Our team looks forward to being of further service and helping the Hospital successfully implement the recommendations in this Assessment.

Thank you.

Sincerely,

Sandra Crayton

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STATEMENT OF LIMITING CONDITIONS

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INTERIM LSU PUBLIC HOSPITAL

The content and analysis of the Assessment contained herein is the property of Alvarez & Marsal Healthcare Industry Group, LLC ("A&M") and may not be copied or distributed without A&M's express consent. By your receipt and review of these materials, you agree to be bound by the terms of this Statement of Limiting Conditions.

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The historical financial information contained herein has been prepared and provided by the Hospital and A&M has relied on the accuracy thereof. A&M has not performed any audit, undertaken any formal due diligence process, nor any other verification of the information provided to it and accordingly provides no assurance or opinion of the information herein. In addition, certain other information used in connection with the preparation of this Assessment has been provided by the Hospital and various benchmarking institutions and has not been independently verified.

Given that detailed, uniform financial data across all of the cost centers and service lines was not available at the completion of this Assessment, any analysis contained herein (as well as any suggestions or recommendations contained herein and/or derived from the content of this Assessment) is subject to reconsideration and/or modification as more information becomes available.

Further, A&M cautions that the information contained herein is based on numerous risks and uncertainties which could cause actual results to differ materially from those currently anticipated, and there can be no assurance that projections herein will be realized. The undersigned members of the A&M team are pleased to submit this Assessment and will gratefully accept any comments or questions.

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EXECUTIVE SUMMARY

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The Interim LSU Public Hospital ("Hospital") is a critical component of the New Orleans Metropolitan Area's healthcare network. The Hospital is the area's only Level I trauma center and provides the majority of healthcare for the medically indigent of seven Louisiana parishes. The Hospital's current situation of interim facilities, multiple patient care areas, fluctuating volumes, budgetary constraints and reimbursement issues all compounded by the devastating effects of Hurricanes Katrina and Rita, has lead to the need to assess the operations and finances of the Hospital.

In January 2009, the Board of Supervisors of the Louisiana State University and Agricultural and Mechanical College engaged Alvarez & Marsal ("A&M") to provide the services of an Interim Chief Management Officer and to lead and assist the Interim LSU Public Hospital ("Hospital") with the analysis and evaluation of overall business operations. The intent is to identify action plans that will seek to improve overall financial and operational performance within the Hospital over a twelve to twenty-four month period. The recommendations contained herein are the culmination of A&M's work to date in identifying quick, impactful savings opportunities, growth initiatives and revenue cycle improvement.

Due to the budgetary constraints and reimbursement issues, A&M believes the Hospital must pursue immediate cost reductions and revenue enhancement initiatives. These initiatives will have an impact on every department in the hospital and therefore will require a total commitment of the Administrative leadership, Department Directors, medical staff, and employees of the hospital. The recommendations have an underlying premise of continuing and even expanding services offered to ensure the Hospital's mission of providing access to quality healthcare for the community, training healthcare professionals for the future, and operating efficiently and cost effectively.

The significant financial impact of the plan is related to workforce productivity, and materials management as well as operational changes to core service lines of the Hospital.

Implementing these initiatives will take commitment, time, and resources. There are hard decisions to be made that will affect the Hospital's stakeholders. In the end, successful implementation will create an organization well positioned to meet the healthcare needs of the community and train healthcare professionals of the future.

SUMMARY OF ENGAGEMENT

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DESCRIPTION OF ENGAGEMENT

Alvarez & Marsal Healthcare Industry Group, LLC ("A&M") was engaged by the Louisiana State University and Agricultural and Mechanical College ("LSU") to provide the services of a Chief Management Officer to lead and assist the Interim LSU Public Hospital ("Hospital") with the analysis and evaluation of overall business operations, with the intent to identify action plans that will seek to improve overall financial and operational performance within the Hospital.

ENGAGEMENT APPROACH

Since the commencement of this engagement, Sandra Crayton has served as the Chief Management Officer, providing day-to-day onsite management for the Executive Staff and Department Heads of the Hospital. Under Sandra's leadership and over the course of the first sixty days, A&M has worked to identify the most pressing issues facing the Hospital. On the operations side, A&M has conducted one-on-one interviews with key members of the administrative, clinical and medical staffs and gathered data on the various service lines and operational entities. On the finance side, A&M has assessed the overall financial performance of the Hospital and conducted a comparative analysis of key financial indicators to develop comparisons to appropriate industry benchmarks.

The areas of most concern are the following:

- ▲ The Hospital's patient volumes declined from FY 2004 to FY 2005 by 10 percent and have not returned to FY 2005 levels after Hurricane Katrina.

- ▲ The Hospital's cost structure is not reflective of current patient volumes or similarly sized Academic Medical Centers or Public Hospitals based on patient admissions, clinic visits, surgery cases, emergency department visits, and other outpatient testing.

- ▲ The Hospital is challenged with managing operations in multiple locations and with facilities that are less conducive to patient care.

- ▲ The Hospital's staff struggle with the effects of Hurricane Katrina and tend to think in "recovery terms" instead of placing greater emphasis on operational efficiency and cost effectiveness.

This Assessment and the Recommendations herein address the concerns and issues identified and help build a stronger foundation for the future. Implementing these recommendations and renewing the focus on the Hospital's mission will instill a fiscal discipline aimed at meeting the challenges ahead. While this Assessment and these Recommendations are based on the Hospital's current financial and operational position, they take into account that the Hospital will operate in its current environment for the next three to five years.

STAKEHOLDERS

Stakeholders

LIST OF STAKEHOLDERS

The success of efforts to improve the overall financial and operational efficiency of the Interim LSU Public Hospital ("Hospital") will depend on agreement among stakeholders concerning the continued mission of ensuring access to healthcare and training future healthcare professionals.

The perspectives of the following stakeholders should be taken into consideration as the Hospital is deciding the future of the organization. Please note that this list is not exhaustive.

- ▲ The taxpayers of Louisiana who expect and require that its government agencies will be efficient and fiscally responsible.
- ▲ The growing population of more than one million residents who call the New Orleans metropolitan area home.
- ▲ The approximately 100,000 patients who have relied on the Hospital for healthcare since re-opening in 2006.
- ▲ The LSU Health Care Sciences Division who as fiduciaries to the citizens of Louisiana are tasked with balancing the competing interests of providing care and being fiscally responsible for an entire health system.
- ▲ The more than 2,500 employees who manage the day-to-day operations of the Hospital.
- ▲ The over 300 medical residents and fellows who train at the Hospital in order to become the healthcare professionals of the future.
- ▲ The more than 400 nursing and allied health training students who train at the Hospital.

HISTORY OF THE ORGANIZATION

HISTORY OF THE ORGANIZATION

A MISSION OF SERVING THE PEOPLE

Founded with a grant from the last will and testament of French sailor and shipbuilder, Jean Louis, the Interim LSU Public Hospital ("Hospital"), formerly known as the Louisiana Charity Hospital System ("Charity") and the Medical Center of Louisiana at New Orleans ("MCLNO"), has provided the majority of healthcare for the medically indigent of the New Orleans metropolitan area ("metropolitan area") since 1736.

Today, the Hospital is part of the LSU Health Care Services Division ("LSUHCSD") which consists of seven state-funded hospitals and a network of community clinics. Collectively, these hospitals provide roughly 85 percent of the total uncompensated care across the entire State and serve as a safety-net which fulfills the State's mandate that all residents have access to care.

At the micro level, the Hospital singlehandedly accounts for fifty three percent of LSUHCSD's overall operating expenses and provides care for roughly half of the system's inpatient admissions, over one-quarter of its clinic visits, and over one-third of its emergency room visits.

A MISSION OF TRAINING FUTURE HEALTHCARE PROVIDERS

There is more to the Hospital's mission than being a facility that provides care to the medically indigent of the metropolitan area. Serving the educational needs of both LSU and Tulane medical schools, the Hospital is dedicated to developing medical and clinical manpower through accredited residency and other health education programs. Pre-Katrina, the Hospital served 573 medical residents and fellows from LSU and Tulane. By contrast, the Hospital, today, is home to over 300 LSU and Tulane medical residents and fellows.

A HISTORY OF PERSEVERING THROUGH DIFFICULT TIMES

Catastrophe is no stranger to the Hospital. Over the course of its history, the Hospital has experienced several catastrophic events, and, each time, it has been quickly rebuilt and returned to the task of providing care.

Hurricane Katrina, however, was unlike any previous disaster in the Hospital's history. Katrina was not the 1743 storm that nearly destroyed the Basin Street iteration of Charity, nor was it the 1809 fire that destroyed the then 24 bed San Carlos version.

Making landfall over Southeast Louisiana on August 29, 2005, Katrina flooded 80 percent of Orleans Parish, more than 95 percent of St. Bernard Parish, and accounted for more than 1,500 storm-related deaths.

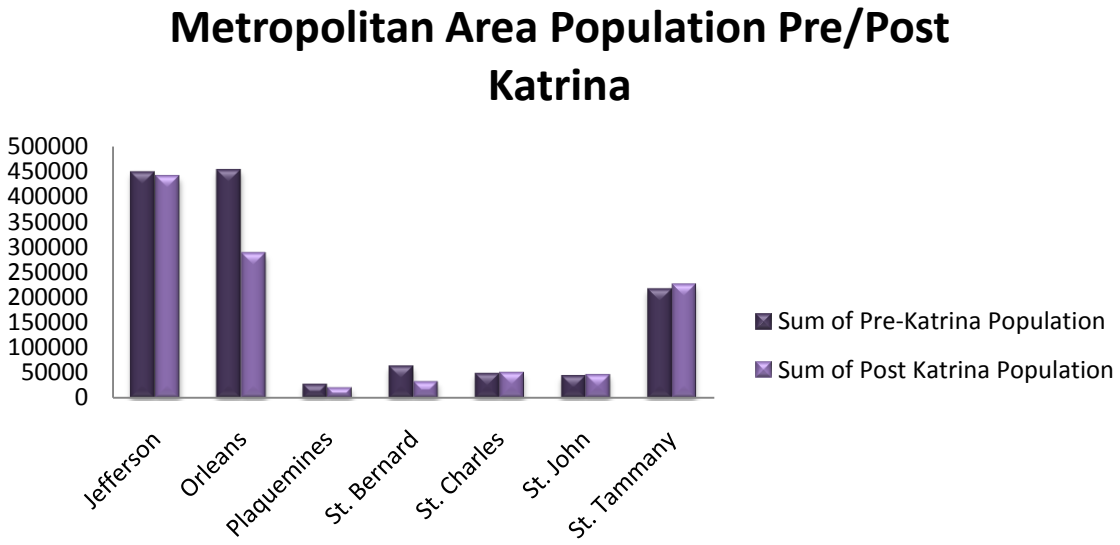
The Hospital alone sustained severe flooding and required that rescuers use boats, helicopters, and buses to evacuate those doctors and patients who had stayed behind, whether out of mission or by necessity. While physical damage to the Hospital can be visibly documented, the emotional havoc that Katrina wreaked on the personal lives of the Hospital's employees still lingers to this day and may never fully be understood.

With its Tulane Avenue facility inoperable, the Hospital, on September 29, 2005, re-established critical care services in the city aboard U.S. Navy hospital ship, the USNS Comfort. Shortly thereafter, "The Spirit of Charity" mobile tent hospital was erected on October 12, 2005 in a parking lot beside the severely damaged Hospital. The Spirit of Charity would move once more to the Ernest N. Morial Convention Center before settling in its current home at the former University Hospital in November of 2006.

A CITY AND HOSPITAL CHANGED FOREVER

Three and a half years have passed since Hurricane Katrina and both the metropolitan area and the Hospital continue to struggle to gain a sense of normalcy.

According to Pre-Katrina Census figures, the metropolitan area – comprised of seven parishes – Jefferson, Orleans, Plaquemines, St. Bernard, St. Tammany, St. Charles, and St. John the Baptist – was home to more than 1.3 million residents. Today, many of the area's neighborhoods are still decimated and the area's population has yet to return to pre-Katrina levels.



For the Hospital, Katrina merely compounded existing problems. With an ever-rising population of medically indigent patients, the Hospital struggles to secure sufficient revenues sources to sustain operations and to make necessary capital improvements.

Today, the Hospital faces the challenge of budgetary constraints, changes in reimbursement, and operations in interim facilities for the next three to five years. The mission "to provide quality services to meet the Healthcare needs of all people through: Medical Care, Education and research; Centers of Excellence; and Leadership without limitations" must continue. The goal is to meet both in an operationally efficient and cost effective manner.

TRANSITION TO THE FUTURE

TRANSITION TO THE FUTURE

MOVING BEYOND THE PAST

The Interim LSU Hospital ("Hospital") is unique in that it has a more than 250 year history steeped in both service to the community and of persevering through great adversity. As the Hospital moves forward, its biggest hurdle will be separating itself from the immediate past and moving toward the future.

This means the Hospital and its employees must move past the ghosts of Hurricane Katrina. No one can deny the enormity of the impact that Hurricane Katrina had on the metropolitan area, the Hospital, and its employees. To move forward, however, the Hospital must find a way to move past the persistent and common belief that the Hospital's current situation was created by Hurricane Katrina. That is simply not the entire story.

For the next three to five years, the Hospital will remain in interim facilities pending the outcome of a decision to build a replacement facility for Charity Hospital. During this time, the Hospital must concentrate on continuing its mission of providing access to healthcare and the training future healthcare professionals, while being good stewards of the public resources it uses to accomplish this mission.

During the implementation of recommendations presented, there will be opportunity to address whether to continue certain services, how to capture additional volumes, determine the impact of patient migration to other healthcare entities, specific reductions in operating costs, and assessing appropriate workforce productivity. All of these will take teamwork, focus and acceptance of change for the benefit of building a solid foundation of operational efficiency and cost effectiveness for the future.

ASSESSMENT

ASSESSMENT

INCREASING FINANCIAL AND OPERATIONAL EFFICIENCY

Due to the Hospital's current budgetary constraints and reimbursement issues, A&M believes that it is imperative to pursue immediate cost reductions and revenue enhancement initiatives. These initiatives will have an impact on every department and, therefore, will require a total commitment from the Hospital's Administrative leadership, Department Directors, medical staff and employees.

Most organizations struggle to maintain efficient operations without significant emphasis being place on a constant review of its revenue cycle and operational cost. Over time, organizations lose focus for many reasons, *i.e.,* changes in leadership, attention to new service lines, or neglect of existing services, and lose the discipline of cost controls, believing that reimbursements and/or other funding sources will remain constant.

Now is the time for the Hospital to re-examine its financial situation and operations and make decisions about how to maximize efficiency as it transitions toward the future.

A&M had the opportunity to conduct reviews of several different areas of operations, including: workforce productivity, materials management, and graduate medical education. Additionally, analyses were completed on three service lines of the Hospital – Nursing Services, Peri-Operative Services and Outpatient Clinic Services. The recommendations herein regarding these areas are based upon A&M's observations of those specific areas and in consideration of available opportunities to improve operational performance that are consistent with the Hospital's mission.

Our findings and recommendations are presented herein. As additional reference, the following data is included for comparison of the Hospital to statistically-similar sized hospitals that report to the Association of American Medical Colleges ("AAMC").

AAMC Data Book Benchmarking Characteristics of Hospital Category		
Integrated AMC:	Refers to a short-stay, general service, non-federal hospital that has signed affiliation agreement with a college of medicine accredited by the Liaison Committee on Medical Education ("LCME").	
Characteristics	**COTH Member Integrated AMC**	**Other Teaching Hospitals**
Number of Hospitals	116	741
Number of Beds		
Under 24	0%	0%
25 - 49	1%	0%
50 - 99	0%	6%
100 - 199	2%	26%
200 - 299	7%	28%
300 - 399	**15%**	**20%**
400 - 499	19%	10%
Over 500	**57%**	**11%**
Region		
Northeast	28%	22%
South	**34%**	**27%**
Midwest	22%	31%
West	16%	20%
Hospital Ownership		
State	**24%**	**2%**
Municipal/County/City	16%	7%
Church	0%	21%
Other Non-Profit	54%	58%
For-Profit	6%	13%
Core-Based STAT Area (CBSA)		
Rural	0%	1%
Micropolitan	1%	7%
Division	35%	30%
Metropolitan	**64%**	**62%**

Source: AAMC Analysis of American Hospital Association Data, updated 6/08

AAMC Data Book Benchmarking Inpatient/Outpatient Operations Data			
	Integrated AMC	Other Teaching Hospitals	LSU Interim Hospital*
Total Admissions	26,543	13,035	13,194
Average Length of Stay	6.0	4.8	5.8
Percentage of Medicare Discharges	31%	43%	12%
Percentage of Medicaid Discharges	23%	17%	46%
Total Inpatient Days	156,540	64,684	77,032
Total Surgeries	18,687	8,838	6,814
Total Births	2,275	1,358	944
Emergency Room Visits	56,175	39,082	61,872
Other Outpatient Visits	403,415	115,739	133,850
Total Outpatient Visits	459,396	157,362	195,722
Total FTEs	4,179.00	1,394.00	2,482.50
FTE per Staffed Bed	7.4	5.2	8.8
FTE per Occupied Bed	9.4	8.0	12.2
FTE per Adjusted Occupied Bed	6.0	4.8	8.2
FTE LPNs	43.00	28.00	105.80
FTE RNs	1,071.00	368.00	782.44
Total FTE Nurses	1,152.00	399.00	888.24
% of Nurses to all Staff	29%	29%	36%
% of RN to all Nurses	96%	92%	88%
Total Beds	569	264	283
Occupancy Rates	79%	66%	72%
Average Daily Census	429	177	203
Adjusted Admissions	40,824	21,352	19,791
Adjusted Patient Days	252,761	106,074	115,548
Adjusted Average Daily Census	693	291	303
Cost per Patient Day	3,766	2,794	5,031
Cost per Adjusted Patient Day	2,497	1,685	3,354
Cost per Admission	23,246	13,918	29,372
Cost per Adjusted Admission	14,995	8,256	19,581
Uncompensated Care % of Total Expense	5.2%	5.0%	47.4%

* Utilized Annualized 2009 Data
Note: FTE figures only reflect staff and trainees on the hospital payroll.
Source: AAMC analysis of American Hospital Association Data, Updated 6/08

RECOMMENDATIONS

RECOMMENDATIONS

SALARIES & BENEFITS

- ▲ The Hospital should adopt a bottom up or zero-based budget approach to staffing every department.
- ▲ The Hospital should implement position-specific controls by job title and department that are consistent with current patient volumes.
- ▲ The Hospital should identify a reliable, accurate, and consistent data source for the department statistic that will become the unit of measure for each department.
- ▲ The Hospital should establish a bi-weekly productivity-reporting tool for the Administrative and Department Director leadership.

MATERIALS MANAGEMENT

- ▲ The Hospital should restructure its Materials Management department into a Supply Chain Organization ("SCO") that is empowered with the proper leadership, accountability, and controls to help manage the entire non-labor spend of the organization.
- ▲ The Hospital should close the offsite warehouse, a move that would result in a reduction of twenty FTEs.
- ▲ The Hospital should reduce Central Supply's operating hours from 24 hours per day seven days per week to sixteen hours per day six days a week, thereby reducing Central Supply FTEs by 7.5.
- ▲ The Hospital should conduct a productivity review of its overall Materials Management operations.
- ▲ The Hospital should review its purchasing policies relative to consignment items.
- ▲ The Hospital should develop a high-performing Value Analysis Program ("VAP") incorporating specific tenets, to include a shift to a more locally based effort and establish a goal of 3 percent savings off total supply and operating services spend.

- ▲ The Hospital should make better use of business intelligence and technology.

GRADUATE MEDICAL EDUCATION

- ▲ The Hospital should review its GME affiliations to determine whether current levels of Medical Residents and Fellows are appropriate when compared to its reduced post-Katrina patient volume.
- ▲ The Hospital should consider increasing the number of Residents and Fellows being shared with other provider organizations to preserve the current number of GME slots available.
- ▲ The Hospital should be recognized for contributing an extra $9.5 million to GME in the state of Louisiana if the determination is made not to decrease the current size of the GME programs.

ADDITIONAL COST REDUCING INITIATIVES

- ▲ The Hospital's Administrative and Department Director leadership should develop the fiscally responsible discipline of reviewing all operating costs of the organization as part of the annual budget cycle.

NURSING SERVICES

- ▲ The Hospital must establish a new table of organization for nursing management that considers the present operation and potential future growth of the organization.
- ▲ The Hospital must consider a significant reduction in nursing management with a subsequent reallocation of work responsibility and accountability.
- ▲ The Hospital should establish a centralized nursing education function.
- ▲ The Hospital should redistribute patient placement in the facility to account for differences in acuity and length of stay by cohorting patients with similar medical conditions.
- ▲ The Hospital should develop a new staffing plan, nursing care delivery model, and scheduling/staffing control system considering all direct and indirect care givers.

- ▲ The Hospital should develop a quality improvement plan with realistic goals focusing on nurse sensitive indicators and core measures to assure an interdisciplinary approach to quality while putting organizational development training in place to enhance interdisciplinary relationships.

- ▲ The Hospital must perform a review of Pharmacy and Respiratory Therapy services that focuses on personnel, purchasing, distribution, and patient care.

- ▲ The Hospital should re-align position controls in Case Management to reflect the current average daily census and add administrative positions to relieve clerical functions from clinical staff.

- ▲ The Hospital must implement an in depth process improvement ("PI") plan for the ED in order to improve throughput and patient care, and reduce costs.

PERI-OPERATIVE SERVICES

- ▲ The Hospital should establish resource management policies and goals with regard to utilization for its OR capacity, aiming for an overall utilization target of 75 percent without turnover.

- ▲ The Hospital should create additional capacity by more effectively utilizing its ORs during prime time, and thereby increasing case volume.

- ▲ The Hospital should create additional capacity by scheduling cases in the late afternoon or early evening.

- ▲ The Hospital should create OR capacity by changing the location of certain procedures to the bedside on the unit.

- ▲ The Hospital should consider developing a separate facility dedicated exclusively to outpatient surgery, provided the demand can be substantiated and payer mix is considered.

- ▲ The Hospital should implement policies and reporting systems to increase effective utilization of block time.

- ▲ The Hospital should conduct an in-depth and comprehensive review of staffing levels and labor productivity metrics to identify cost reducing opportunities.

- ▲ The Hospital should develop and/or enforce compliance with scheduling protocols and training for Residents to improve OR scheduling.
- ▲ The Hospital should develop a plan to determine those resources required to increase EAC volume.
- ▲ The Hospital should aim to create a system for assembly of case carts and preparation of ORs the evening prior to surgery.
- ▲ The Hospital should develop a work plan to monitor the use and availability of instrumentation to ensure both service mix and volume are not impacted by the availability of instrumentation.
- ▲ The Hospital should develop a work plan to conduct a comprehensive throughput review by hour-of-day to evaluate productivity, capacity, and identification of gridlock times with potential solutions.
- ▲ The Hospital should develop standardized policies and processes with regard to higher levels of communication between the RN/CRNA Board Runner team and the intra-op staff to improve turnover and start times.
- ▲ The Hospital should develop a work plan to improve the quality of data capture and the reporting/use of key metrics to manage performance and improve throughput.

OUTPATIENT CLINIC SERVICES

- ▲ The Hospital should explore and develop a strategic plan aimed at developing a comprehensive plan for its outpatient programs.
- ▲ The Hospital should explore the option of converting its community based clinics into Federally Qualified Health Centers (“FQHC”).
- ▲ The Hospital should consolidate the functions of the Medicaid Application Process with the admission process and generate higher Medicaid reimbursements.
- ▲ The Hospital should change its nursing staff mix to utilize LPNs rather than RNs for direct patient care in the OCS.
- ▲ The Hospital should aim to increase the overall productivity of the OCS.

- ▲ The Hospital should designate a senior-level manager for OCS with the responsibility for day to day operations.
- ▲ The Hospital should develop a strategic plan to grow its outpatient programs.
- ▲ The Hospital should enhance the capabilities of the CLIQ system in anticipation of the creation of a system wide EMR.

DECISION SUPPORT SYSTEMS

- ▲ The Hospital's Information Technology ("IT") Department should be granted access to all systems that it does not currently have access to.
- ▲ The Hospital should make better use of the data and reports that can be generated by its current systems and implement a training program designed around teaching administrators how to use and access that information.
- ▲ The Hospital should implement a DSS to ensure that its Administrative and Department Director leadership are using real time data to make informed decisions.

SALARIES & BENEFITS

SALARIES & BENEFITS

SUMMARY

- ▲ Salaries and Benefits currently account for roughly 40 percent or $154 million of the Hospital's $410 million operating budget.
- ▲ The Hospital currently does not have a consistent workforce productivity system to manage Full Time Equivalents ("FTE") and salaries and benefits costs.

RECOMMENDATIONS

- ▲ The Hospital should adopt a bottom up or zero-based budget approach to staffing every department.
- ▲ The Hospital should implement position-specific controls by job title and department that are consistent with current patient volumes.
- ▲ The Hospital should identify a reliable, accurate, and consistent data source for the department statistic that will become the unit of measure for each department.
- ▲ The Hospital should establish a bi-weekly productivity-reporting tool for the Administrative and Department Director leadership.

BACKGROUND

Salaries and benefits for the Hospital's employees are estimated to account for 40 percent or $154 million of the Hospital's $410 million operating budget in fiscal year ("FY") 2009. Given the magnitude of these costs it is important that the Hospital put in place strict measures aimed at increasing the productivity and efficiency of its current workforce.

Compounding the Hospital's workforce productivity and efficiency problems is the fact that it operates out of multiple locations, has work space constraints in certain areas, and fragmented departmental operations.

As the Hospital continues to grow and change, now is the time to implement a productivity system aimed at establishing appropriate levels of workforce productivity. In addition, this productivity system will allow the Hospital's

administrators to effectively measure changes in the organization and adjust employee utilization to respond to those changes.

PROCESS

The salaries and benefits review focused on workforce productivity and not compensation rates or benefit structures. While compensation and employee benefits are important components of overall salary costs, those costs are influenced by market competition, State of Louisiana policy, and other factors beyond the Hospital's control.

Human resources surveys have shown that employees will choose a place to work because of the mission, structure, and workflow process just as much as they will choose it because of compensation and benefits. It is important for the Hospital to have a productivity system in place that will ensure that the Hospital is maximizing the efficiency of its workforce.

An organization can define productivity in terms of the number of specific positions necessary for the organization to accomplish day-to-day operations in conjunction with how many hours each position is utilized in a defined period of time, *i.e.*, a payroll cycle. Productivity can then be measured by comparing paid hours to a departmental statistic.

The departmental statistic is a unit of measure specific to the services performed by that department of the organization. In a hospital setting, for instance, nursing units are measured based on number of patients per day.

The purpose of the department productivity standard is to measure how many personnel hours are required to produce a unit of measure. The measurement must also consider productive and non-productive time. Productive time generally represents the hours necessary to meet department specific service expectations and completion of tasks. Non-productive time represents vacation, holiday, personal and other time spent away from the organization.

The first step in analyzing the Hospital's productivity was to review a sample bi-weekly payroll period. The Hospital has two pay cycles for its employees – bi-weekly and monthly. Most of the Hospital's full time equivalents ("FTE") are paid on a bi-weekly basis, while monthly payroll accounts for less than two percent of the staff.

Our review consisted of gathering productive and non-productive hours for each department over a fourteen day pay period. With assistance from Human Resources and Finance department personnel, we separated productive and non-productive time. Accumulating productive and non-productive time, total paid FTEs were calculated for every department in the Hospital.

The second step involved identifying an appropriate departmental statistic to use as a unit of measure. The Hospital currently produces monthly statistical reports, gathered from individual departments, which include statistics related to volume, patient days, admissions, and other departmental statistics. Utilizing these statistics, we were able to define specific departmental statistics and an overall Hospital unit of measure of paid employees per adjusted occupied bed.

FINDINGS

Based on our analysis of productive and non-productive paid hours, the Hospital is under performing when compared to recognized Association of American Medical Colleges ("AAMC") productivity benchmarks. The data presented below indicates a trending for the first six months of FY 2009 of paid FTEs compared against adjusted occupied beds.

	July 2008	August 2008	September 2008	October 2008	November 2008	December 2008	January 2009	Fiscal Year to Date
Paid FTEs	2,182.2	2,339.8	2,873.8	2,493.0	2,483.3	2,513.7	2,508.2	2,482.5
Average Daily Census	205.6	197.2	199.3	204.1	198.7	209.7	208.9	203.4
Outpatient Adjustment Factor	1.51	1.53	1.43	1.52	1.49	1.48	1.50	1.49
Adjusted Average Daily Census	310.6	302.0	285.0	310.9	295.3	309.3	313.0	304.0
Employees per Adjusted Occupied Bed (EE/AOB)	7.0	7.7	10.1	8.0	8.4	8.1	8.0	8.2

The benchmark for efficiently performing AAMC hospitals is six FTEs per adjusted occupied beds ("FTE/AOB"). Since many departments perform both inpatient and outpatient activity with the same personnel, this provides a unit of measure that reflects the combination of inpatient and outpatient activity.

The data suggests that paid FTEs are fairly stable for the six month period and is consistent with census volume trends. In addition, the data also suggests that a consistent number of FTEs are utilized to provide care for a consistent volume of patients. However, at these volume levels, FTE/AOB is ranging from 7.0 to 8.4, roughly 25 percent higher than the benchmark.

RECOMMENDATIONS

The Hospital should adopt a bottom up or zero-based budget approach to staffing every department.

To accomplish this, the Hospital should conduct a detailed review of departmental tasks and responsibilities and the appropriate levels of experience necessary to complete those tasks. The goal of this review is to produce a departmental staffing grid for an average two week period that indicates what level of employee experience is needed and how many hours are required to accomplish the task. As part of this analysis, a review of purchased services should be completed to identify "hidden FTEs". When a decision is made to outsource a service often there is an FTE component to the services.

Examples of hidden FTEs in the Hospital can be found in nursing contract labor hours, security services, housekeeping services, and dietary services. In these areas, annual costs are estimated to be over $7 million with approximately 100 FTEs. These FTEs should be counted in overall productivity monitoring and undergo the same review as other departments and areas in the Hospital.

The Hospital should implement position-specific controls by job title and department that are consistent with current patient volumes.

Using the staffing grid discussed in the previous recommendation, the Hospital should identify the types of positions required by each department to accomplish its tasks. Doing so will establish a baseline for recruiting and retaining appropriate levels of employee resources for each department. It will also serve as a guide for Administration, Department Directors, and Human Resources to ensure that each department is adequately staffed at all times.

The Hospital should identify a reliable, accurate, and consistent data source for the department statistic that will become the unit of measure for each department.

As mentioned above, the unit of measure and staffing grid are important in establishing how many personnel hours per statistic are required for the department to meet the expectations of its patients. There is an existing revenue report that provides data about patient revenue and quantities generated by each department. This is an excellent resource because it matches revenues generated by the department with quantities or units of measure. For non-revenue producing departments, the statistic can be based on an overall hospital statistic or a defined department activity, such as patient meals served or cleanable square footage.

The Hospital must establish a bi-weekly productivity-reporting tool for the Administrative and Department Director leadership.

This report will allow administrators to access and measure the efficiency and effectiveness of employee resources in the Hospital. Ideally, this tool would represent productivity trends based on a six month time period and be compared to agreed upon department and Hospital benchmarks. A productivity tool that works in conjunction with the existing time and attendance system is available from the vendor. Contract or temporary staff should record hours in the time and attendance system as well as for purposes of tracking the productivity of out-sourced department services. This type of tracking will also serve as a record of time worked that can be verified against invoice billing from the out-sourced vendor.

CONCLUSION

By implementing the recommendations herein, the Hospital will create an organizational expectation of fiscal discipline, while continuing its mission of delivering healthcare to the community and training future healthcare professionals in a cost effective manner.

These recommendations will result in significant cost reductions of between $25 million to $46 million for the Hospital. These reductions will depend on the Hospital's ability to change work flow and processes. With an annualized employee turnover rate of 13 percent, cost reductions will not be realized through employee vacancies alone. There must be an overall plan to eliminate FTEs in a reasonable time to realize the full impact of these cost reductions. The table below illustrates the potential cost reductions at various levels of success.

	100% Success	75% Success	50% Success
Fiscal YTD Adjusted Average Daily Census	304.0	304.0	304.0
Target Goal of EE per Adjusted Occ Bed (EE/AOB)	6.00	6.50	7.00
Average Hourly Rate- Jan 2009	$ 26.91	$ 26.91	$ 26.91
Fiscal YTD Paid FTEs	2,482.5	2,482.5	2,482.5
Target FTEs	1,823.8	1,975.7	2,127.7
FTE Reduction	**658.7**	**506.7**	**354.7**
FTE Reduction %	**23.5%**	**17.4%**	**11.2%**
Annual impact of FTE Reduction	$ 36,861,942	$ 28,356,701	$ 19,851,461
Annual impact of Benefits @ 25%	$ 9,215,485	$ 7,089,175	$ 4,962,865
Total Annual Impact to Salaries & Benefits	**$ 46,077,427**	**$ 35,445,876**	**$ 24,814,326**

To realize these cost savings, the Hospital must commit to the more substantial task of implementing the following long-term measures:

- ▲ Implementing hospital-wide process improvements;
- ▲ Reorganizing and redesigning current work flows to accommodate the multiple locations that the Hospital operates out of;
- ▲ Developing data reports that can be delivered in a timely manner to Hospital administrators and department directors; and
- ▲ Developing consistent communication, training, and educational protocols at all levels of staffing so that everyone, from the bottom up, understands how to achieve the Hospital's productivity goal.

A&M recognizes that the process of implementing a productivity management system will not be without its challenges. By investing time and resources to make changes today, the Hospital will be well positioned for future growth. We believe that these recommendations could be accomplished in six to nine months.

MATERIALS MANAGEMENT

MATERIALS MANAGEMENT

SUMMARY

- Materials Management is a term used by hospitals when the department only manages the procurement, storage and distribution of supplies, much like Materials Management currently functions at the Hospital.
- The Hospital's Materials Management department is poorly organized, operates out of multiple locations, has cumbersome work flow processes, and is minimally automated. As a result it has 72.0 FTEs dedicated to the procurement and delivery of supplies throughout the organization.
- Although there are many rules and regulations relative to purchasing through the state contracting system and local purchase order system, there are insufficient controls over who is purchasing and what is being purchased. Department managers are not being held accountable to purchasing limits and are unaware on an interim basis how much their department has spent on supplies.

RECOMMENDATIONS

- The Hospital should restructure its Materials Management department into a Supply Chain Organization ("SCO") that is empowered with the proper leadership, accountability, and controls to help manage the entire non-labor spend of the organization.
- The Hospital should close the offsite warehouse, a move that would result in a reduction of twenty FTEs.
- The Hospital should reduce Central Supply's operating hours from 24 hours per day seven days per week to sixteen hours per day six days a week, thereby reducing Central Supply FTEs by 7.5.
- The Hospital should conduct a productivity review of its overall Materials Management operations.
- The Hospital should review its purchasing policies relative to consignment items.

- ▲ The Hospital should develop a high-performing Value Analysis Program ("VAP") incorporating specific tenets, to include a shift to a more locally based effort and establish a goal of 3 percent savings off total supply and operating services spend.
- ▲ The Hospital should make better use of business intelligence and technology.

BACKGROUND

The term "Materials Management" is a term used by hospitals when those departments are only responsible for managing the procurement, storage, and distribution of supplies. As industry standards have changed, the term "Supply Chain Organization" ("SCO") is used to refer to departments that, while still responsible for the above mentioned roles, also serve to manage all non-labor expenses in an organization under the leadership of a qualified executive.

Currently, the Hospital is facing significant financial and operational challenges that have been exacerbated by state economic conditions and the lingering effects of Hurricane Katrina. The make-up of the Hospital's current Materials Management operations remains designed for a much larger organization and inadequate systems have caused inefficiencies throughout.

PROCESS

The A&M team conducted a review of the Hospital's Materials Management department to identify operating efficiencies and opportunities to improve the function of this department.

This Assessment was completed through interviews with key stakeholders, onsite observations of key work processes, and analysis of key data and other information. Our review of the Materials Management department included a review of purchasing, receiving, warehouse and logistics, product standardization, and value analysis related activities to identify opportunities for improvement to processes and technology.

FINDINGS

Warehouse & Central Medical Supply Operations

The Warehouse is located one-half mile from the Hospital. The five story, approximately 63,480 square foot facility was built in 1961. The warehouse operates Monday through Friday, from 7:00 a.m. to 3:30 p.m., and is staffed by 23.0 FTEs. The Warehouse's electrical distribution system was destroyed by Hurricane Katrina and requires the facility as well as those facilities housing the laundry and maintenance functions to be powered by a rented diesel generator that costs approximately $40,000 per month.

The Warehouse's location prohibits the unloading of supplies from tractor-trailers directly to the dock, requiring these vehicles to be unloaded on a side street and supplies to be carted to the Warehouse. The panel truck that delivers to the Hospital and clinics is able to back up to the loading dock.

The Warehouse and Central Supply operate as perpetual inventory sites, with the Warehouse serving the supply needs of Central Supply and the outpatient clinics. The service requirements of the clinics are reportedly minor. Central Supply serves the supply needs of the Hospital.

The Hospital physical plant has two potential locations that could be combined for the creation of a warehouse function: one co-located to the receiving area and the other in what is currently Central Supply located approximately 120 feet directly down the hall. The total square footage of both areas is nearly 6,000 square feet. Hospitals that are similarly positioned generally dedicate between 5,000 to 7,000 square feet for supply storage.

Central Supply operates 24 hours per day seven days per week and is staffed by 30.0 FTEs. This uninterrupted staffing approach is atypical for the industry, but the belief at the Hospital is that it serves to provide high customer service, enhance loss prevention, and perform tasks that can be accomplished more readily during the slower times of the day.

A recent physical inventory indicates that the value of inventory at the Warehouse and Central Supply is approximately $3.4 million and $380,000, respectively for FY 2009, indicating 7.2 turns for predominately commodity items. A turn is defined as the number of times the entire inventory should turnover in one year. The industry benchmark for main warehouse supply turns is fifteen to eighteen. The physical layout of the Warehouse and size of its inventory make

timely rotation of stock difficult at best. On the day of our visit, we observed numerous pallets of goods in the expired and obsolete section of the warehouse.

The volume of expired and obsolete goods, some of which was planned for return to the vendors, was noticeably high and took up a large section of the Warehouse's ground floor. Many of these goods appeared to be damaged by the weight of being stacked on one another or had sat idle for long periods. As such, much of this product is unlikely to be returned for credit. The FY 2008 physical inventory indicated a write-off of $1.3 million, which represents a nearly 5 percent loss. The industry standard, which includes loss due to shrinkage, expired and obsolete product, is less than 3 percent.

Product stickers are being affixed to nearly all items in Central Supply regardless of their chargeability. It is estimated that more than 95 percent of items stickered are non-chargeable commodity types. Product stickers are pulled and affixed to a patient charge sheet when used. The respective nursing unit clerk then processes patient charge sheets. The charge capture rate of this process is reportedly very low. In total, there are reportedly one to two Central Supply FTEs dedicated to "stickering" activities.

Central Supply has planned to end the use of product stickers once the Hospital's automated point-of-use supply dispensing system (*see Business Intelligence & Technology Automation* section below) is deployed. Currently, Omnicell units are located throughout the Hospital and are being used like open wire shelving.

General Materials Management Operations

Issuance and management of state contracts is centralized within the LSU System. These contracts currently account for between 60 to 70 percent of all contracts the Hospital accesses. The Hospital-based Purchasing function can review what is on state contract through the materials management system. The remaining 30 to 40 percent of these contracts are developed and bid at the Hospital level. Like the state contracts, these contracts are accessed through the PeopleSoft system.

Purchase orders are generated by twelve FTEs. More than 90 percent of these purchase orders begin as customer generated electronic requisitions for non-stock items through the PeopleSoft system. Reportedly, 100 percent of the Hospital's customer initiated requisitions are electronically generated through this system. From July 2008 through December 2008 7,841 purchase orders were generated by Purchasing, which when annualized calculates to 1,306 purchase

orders per FTE or approximately five per day per FTE, assuming 250 eight-hour days. The minimum industry standard is eight purchase orders per day per FTE.

Further review of these purchase orders indicates that 2,083 or 27 percent of all purchase orders were initiated by requisitions from the Operating Room. This would indicate that a very experienced requestor, who presumably is more accurate and causes less rework, generates much of Purchasing's workload.

There are five FTEs in Materials Management Administration, including one Director and four support positions, which is larger than expected. The exact roles of each support position were unclear and how specifically each is charged with facilitating better administration of an outdated Materials Management flow. Additionally, it was not determined what integration exists between these positions and other internal areas of the Hospital (i.e., Finance, Nursing, etc.) as well as external (i.e., Value Analysis, PeopleSoft Support Team, etc.). With a larger administrative team, integration with these other areas would be expected.

There are approximately 100 Hospital-based personnel with "requestor" status in the Materials Management system that are able to generate electronic requisitions. Reportedly, all of these individuals were required to attend a four-hour system training class.

Use of consignment for high-end products in the procedural areas such as the Operating Room and Cath Lab is unexpectedly low. It is believed that this means of purchasing is more costly and lends itself to greater obsolescence. While it is true that per unit cost of consigned items is higher, the difference, if any, is negligible when the product is a low use item. As for obsolescence, this is not true and, in fact, consignment minimizes this risk for the customer organization.

It is apparent that the Materials Management staff are unable to apply basic supply chain practices, strategies, principles and concepts (i.e., identification of inventory turnover rate and ways to affect it) because the staff remain in a constant reactive mode addressing day-to-day needs. Largesse of Materials Management does not facilitate accomplishment of day-to-day operations but fosters reactive thinking. The size and location of an offsite warehouse, for instance, hinders streamlined logistics, causes supply waste and creates disconnected warehouse staff that have little or no connection to the Hospital's overall operations. Instead of considering the customer (i.e., the patient), their task is to maintain a warehouse function housed in a less than ideal environment.

Lack of technology and business intelligence tools are, at best, a hindrance to successful operations.

Value Analysis

Projected FY 2009 supply and operating services spend ($108.5 million) as a percentage of total budgeted operating expenditures ($410million) is 26 percent, which is within the desired industry benchmark range of between 25 to 28 percent. However, an interpretation of this value is skewed by the affects of the Hospital's total expenditures being extremely high.

Value analysis efforts as described by the Hospital staff seem to indicate that:

- ▲ Very top-down and globally directed from LSU;
- ▲ Has no reporting responsibilities to any Hospital-based executive;
- ▲ Has no standing Hospital-based physician involvement;
- ▲ Has a solid complement of nursing members but, as such, is primarily geared towards patient safety concerns; and
- ▲ Concerned primarily with large-ticket clinical items that are purchased through HCSD's GPO, Amerinet, but ignoring non-GPO items, purchased services or non-clinical items.

Reportedly, the Value Analysis function has helped the seven hospital LSU HCSD System save approximately $7 million since the inception of its relationship with Amerinet in 1999. Reportedly, this represents $600,000 in savings per year for the Hospital, a very small fraction of the Hospital's overall supply and operating services spend of $108.5 million.

The Hospital has recently initiated a review of its spend on office supplies, forms and copiers/printers. This effort, led by the Chief Financial Officer ("CFO") and without the support of the Value Analysis infrastructure, has already identified savings opportunities for the Hospital.

The LSU HCSD has drafted a product and equipment standardization policy that is currently under review. Early indications are that the policy states that each hospital within the System "must develop and implement procedures which ensure compliance with the System's clinical and procurement procedures."

Additionally, the policy specifies which hospital specialty groups must meet on a regular basis.

Business Intelligence & Technology Automation

Reporting, other than Hospital's financials, is provided on an ad hoc basis from the PeopleSoft Support Team that serves all of the System's seven hospitals. This reporting, as demonstrated by the recent requests made for this document, seems timely and accurate. However, few Materials Management personnel could cite key performance indicators for their respective areas. Only a very few customer department leaders know their supply chain spend and how they can affect it.

The Hospital purchased an automated point-of-use supply dispensing system from Omnicell in 2007 in anticipation of a new facility being built. It is unclear what will be accomplished through implementation of the system and whether there will be a return on the investment. While waiting for construction of a new facility, wired supply shelving on the nursing units was entirely replaced by dozens of very expensive Omnicell units as management was informed that these units could later be moved to the new facility. To date, these units serve as glass encased storage of supplies. The units are not powered nor are they integrated with the Materials Management system.

Patient care staff pulls supplies from these units as they did when the supplies were stored on open wire shelving. For more than a year, patient care staff have habitually pulled supplies in this manner. An attempt to train them on the appropriate use of the Omnicell units at a later date will be difficult at best. An inspection of these units in several patient care areas indicated that few chargeable supplies were actually stored in the units.

In January 2008, the Hospital asked HCSD Finance to build an interface between the Materials Management system and Omnicell. The Hospital, in turn, was advised to submit a request through its Information Technology ("IT") director. Nearly fourteen months later, this interface has not been built and the Omnicell system remains idle.

Purchase of the Omnicell system and placement of its units throughout the entire Hospital without conducting a cost-benefit analysis or developing an implementation plan was a poor decision. Notwithstanding the investments to date, the Hospital has additional investments to make, including but not limited to:

- ▲ Development of interface(s) to the Materials Management and financial systems;
- ▲ Development of training, policies and procedures documentation;
- ▲ Re-training of Materials Management staff;
- ▲ Training of patient care staff;
- ▲ Configuration of the system to meet any new requirements since these were originally developed; and
- ▲ Ongoing Omnicell maintenance fees.

Technology used to automate work processes within the receiving, warehouse and distribution functions (i.e., hand-held devices) is non-existent. Staff serving these functions cited this as an opportunity to improve their workload capacity.

RECOMMENDATIONS

The Hospital should restructure its Materials Management department into a Supply Chain Organization ("SCO") that is empowered with the proper leadership, accountability, and controls to help manage the entire non-labor spend of the organization.

The Hospital's current Materials Management department is responsible for $57 million in supply expenses. An SCO approach, however, would expand the department's influence and responsibility to manage over $100 million of supplies as well as services.

The Hospital should close the offsite warehouse, a move that would result in a reduction of twenty FTEs.

Supply storage space at the Hospital is more than adequate to serve the needs of the Hospital and outlying clinics. By closing the offsite Warehouse and consolidating Materials Management operations at the Hospital, staffing levels can be reduced by a minimum of twenty FTEs, resulting in an annual labor savings of $704,000. Consolidation of the supply storage function to the Hospital will facilitate the rotation of stock and bring down the amount of expired and obsolete goods.

Further, the Hospital could eliminate the need for the power equipment currently used at the Warehouse operations, including forklifts and battery-powered dollies.

The Hospital should reduce Central Supply's operating hours from 24 hours per day/seven days per week to sixteen hours per day/six days a week, thereby reducing Central Supply FTEs by 7.5.

The Hospital should explore opportunities, including surveying customer departments, adding more passive security and rescheduling responsibilities, that will allow it to move to a sixteen-hour/six days per week operation with very limited coverage on the seventh day. This schedule change could mean a staff reduction of 7.5 to ten FTEs with an annualized labor savings of approximately $293,000. Develop and deploy inventory best practices to counter losses in line with industry benchmarks (a loss rate of 3 percent).

A daily patient supply charge, if allowable, would generate more revenue at much less cost than the current "stickering" process. The reduction in highly manual, non-value added work on the nursing floors would result in the elimination of at least one FTE tied to this function and use of any related equipment.

The Hospital should conduct a productivity review of its overall Materials Management operations.

Given the electronic nature of the requisition to purchase order process, the number of state-based contracts, and high percentage of Operating Room-based purchase orders, Purchasing staff productivity is extremely low. By reducing the purchasing Department by six FTEs to meet industry productivity standards, the Hospital will see an annualized labor cost reduction of $278,000.

Review Operating Room spending patterns to determine the number of off-contract purchases. As appropriate, assign Materials Management Administration nurse to work with Operating Room Director in initiating a spend review and perhaps involvement in the Hospital's Value Analysis Program (see *Value Analysis* section).

Review the role of each position in Materials Management administration in detail and assess the staffs' performance against their respective roles.

Evaluate integration and governance structures to assess best framework for Administration and its relationship to other areas internal and external to the Hospital. Identify and deploy tools and training to support a well operating SCO. Instill expectations for high performance and reward accordingly. Identify potential leaders and develop them through low-cost mechanisms, including networking within local supply chain professional groups and other area hospitals.

Streamline the organization to be more nimble and co-located where possible.

The Hospital should review its purchasing policies relative to consignment items.

The Hospital should explore opportunities to use consignment in the procedural areas, specifically the Operating Room and Cath Lab, for high-end items, paying particular emphasis to items that are lost, missing or obsolete.

Some vendors provide automated tracking systems for their products at little or no cost. Explore opportunities to use such vendor technologies.

The Hospital should develop a high-performing Value Analysis Program ("VAP") incorporating specific tenets, to include a shift to a more locally based effort and establish a goal of 3 percent savings off total supply and operating services spend.

The Association of Hospital Resource & Material Managers believes that healthcare organizations have an opportunity to reduce supply chain expenses by as much as 15 percent through internal initiatives, and realize a nearly 4 percent improvement in bottom line performance. One mechanism that organizations apply to realize these annual benefits is through a high-performing Value Analysis Program ("VAP") that incorporates the following tenets:

- ▲ Is accountable to the organization's CFO/COO and CNO;
- ▲ Is led by a credentialed supply chain subject matter expert (initially, this leader should devote 60 to 75 percent of his/her time to this effort);
- ▲ Maintains and tracks a catalogue of initiatives, including but not limited to product/pricing changes identified by the organization's GPO;
- ▲ Is given an annual cost savings goal of no less than 3 percent of total spend;
- ▲ Has a balanced membership complement by functional type (clinical vs. non-clinical), location site where applicable, and credible leadership;
- ▲ Has at least one physician member (preferably someone representing an invasive area where supply expenses are highest); and
- ▲ Deploys a formal communication strategy that includes reporting to the entire organization on a regular basis (no less than quarterly).

The Hospital's newly drafted product and equipment standardization policy encourages greater product standardization but is far off from industry leading practices for VAP. The policy's shortcomings include:

- ▲ Too GPO-focused when only 40 percent of purchases are made on contract;
- ▲ Too standardization-focused when utilization and pricing considerations may have a greater impact;
- ▲ Too clinically-focused, ignoring potential improvements to non-clinical supplies and purchased services;
- ▲ No accountability of the specialty groups to the Hospital's Management within the context of the standardization efforts; and
- ▲ Incorporates a new policy as one component to a more comprehensive Hospital-based VAP.

The Hospital should make better use of business intelligence and technology.

Given that supplies and operating services represent nearly 30 percent of the Hospital's overall budget, Materials Management staff and Departmental Managers should be more aware of key metrics driving their non-labor spend. Customer departments should be able to articulate how much they spend and on what major categories. Likewise, Materials Management's leadership should understand and be able to articulate the drivers of its operations.

Materials Management leadership in conjunction with Finance and HCSD's Materials Management Team should design, develop and distribute a monthly departmental supply chain report of basic information, including the actual to budget supply spend and supply spend by general ledger category. Additionally, Materials Management's leadership should lead the development of a Materials Management report card of key performance indicators used to drive desired behaviors/actions from the Materials Management team.

Before further effort is expended on Omnicell, Hospital Management and Materials Management leadership should convene to better understand the business and investment requirements to complete its implementation, including but not limited to the goals/objectives, confirmation of the future state design and performance tracking/measurement. Reduce future investment outlay and recover costs of decommissioned Omnicell units.

CONCLUSION

The Hospital is facing significant financial challenges that can be partially addressed through a comprehensive and focused improvement effort in its Materials Management department. Total supply chain expenditures are $105.6million and $2.9 million for non-labor and labor, respectively. This report

outlines opportunities to realize hard dollar benefits of more than $6.8 million over the next twelve months and $4.8 million annually thereafter, including a reduction of 34.5 FTEs.

GRADUATE MEDICAL EDUCATION

GRADUATE MEDICAL EDUCATION

SUMMARY

- The Hospital has a Medicare approved 573 slot Graduate Medical Education Program ("GME") in affiliation with both the LSU and Tulane University schools of medicine.
- In FY09 there are a total of 300.42 FTE Residents and Fellows among the core departments and subspecialties from both schools. Prior to Katina the Hospital utilized all of its 573 GME slots. In the years after Katrina it "farmed out" a significant number of slots through Centers for Medicare and Medicaid Services ("CMS") and Medicare approved Emergency Affiliation Agreements to other HCSD and private hospitals nationwide.
- The estimated total program annual direct cost including supervision for FY 2009 is $39.9 million, which represents just over $133,000 per Resident/Fellow FTE.

RECOMMENDATIONS

- The Hospital should review its GME affiliations to determine whether current levels of Medical Residents and Fellows are appropriate when compared to its reduced post-Katrina patient volume.
- The Hospital should consider increasing the number of Residents and Fellows being shared with other provider organizations to preserve the current number of GME slots available.
- The Hospital should be recognized for contributing an extra $9.5 million to GME in the state of Louisiana if the determination is made not to decrease the current size of the GME programs.

BACKGROUND

Tulane's medical school, despite having its own hospital where it conducts GME training, has been educating physicians through the Charity system since its founding in the 1830s. LSU's medical school has operated in the Charity system since its opening in 1931. The two programs have operated side by side since.

In FY 2009 there are a total of 300.42 FTE Residents and Fellows among the core departments and subspecialties from both schools.

Graduate Medical Edcuation Resident/Fellow FTEs			
FY 2009	Core	Subspeciality	Total
LSU	94.55	120.25	214.80
Tulane	50.50	35.12	85.62
Total	145.05	155.37	300.42

Prior to Katina the Hospital utilized all 573 of its GME slots. In the years after Katrina it has "farmed out" a significant number of its slots through CMS and Medicare approved Emergency Affiliation Agreements to other HCSD and private hospitals across the country. The chart below demonstrates how the slots have been adjusted from 2006 to 2008:

	2005	2006	2007	2008
Number of Residents	573.00	134.46	120.64	205.00
Out Placement	-	308.00	388.00	301.00
Vacant		130.54	64.36	67.00
Approved Slot (MC Cap)	573.00	573.00	573.00	573.00

Although this outplacement continues, LSU would much prefer to train all of its Residents and Fellows at the Hospital. Tulane also would very much welcome the opportunity to train more of it Residents and Fellows at the Hospital. Because of the outplacement of Residents, there are more administrative complexities of time management and tracking of the student's total hours at the various hospitals.

Because the Hospital's Medicare volume is only about 10 percent, the Hospital receives a relatively low reimbursement amount on this major expense. For example, the FY08 Medicare cost report showed that the annual cost incurred by the Hospital for GME was $35.1 million and the amount reimbursed was only about $2.7 million. While Medicare is typically a primary funding source for GME at most academic medical centers, here the Hospital also receives funding through uncompensated care and State general funds.

PROCESS

The individual LSU and Tulane contracts, fee schedules and YTD invoices were reviewed with Hospital contract management staff to understand the legal and financial relationship between the two schools and the Hospital. Each school utilizes a single contract for House Officers (Residents/Fellows) which references FTEs by department in an appendix. Each school also utilizes a single supervision contract and reverences FTEs and supervision ratios by department in the appendix.

To evaluate whether 300.24 FTEs were an appropriate total and core/subspecialty mix comparisons were made to the Hospital's own historical trends over the last several years and to other academic medical center GME programs.

Information provided by the Reimbursement Department of HCSD and a review of the Medicare cost report for 2008 shows that the Hospital has successfully modified the number of slots being "farmed out" several times in the last couple of years based on volume fluctuations. The same process should be used to make this recommended modification. It is important for the organization to maintain its total approved slots so that as volume increases occur going forward, the slots can effectively be moved back to the Hospital in such a way as not to disrupt the long term integrity of the programs.

FINDINGS

While the Hospital's mission is to "develop medical…manpower through accredited residency…programs," it is also to "provide access to high quality medical care" and "operate efficiently and cost effectively." The mission statement reflects the important balance of many competing, although not mutually exclusive aspects of the organization. As such it must not allow any one aspect to endanger or negatively impact the others.

From a GME program standpoint there are many stakeholders, including:

- ▲ Residents/Fellows;
- ▲ The Hospital;
- ▲ Two medical schools;
- ▲ Accreditation Council for Graduate Medical Education; and
- ▲ State of Louisiana.

While the Hospital must balance its mission commitments, the two GME programs are also challenged to balance the many stakeholder interests, which at times may conflict or compete with each other.

With the both GME programs there is an additional interested group and that is the freestanding hospitals across the State. It is not uncommon for the Schools of Medicine to receive specific requests from these hospitals for physician specialty training not only in the more common areas, but also in subspecialties, which require complicated programmatic changes to accommodate.

RECOMMENDATIONS

The Hospital should review its GME affiliations to determine whether current levels of Medical Residents and Fellows are appropriate when compared to its reduced post-Katrina patient volume.

Since these programs were originally developed when the hospital was operating on a much larger scale and there have been significant swings in volume since Katrina, both should be reviewed again for FY 2010 based on the current inpatient and outpatient volumes. A preliminary review indicates that there may be an excess of as many as 72.6 FTEs across both programs resulting in as much as $9.5 million in excess annual direct costs being incurred by the Hospital.

The Hospital should consider increasing the number of Residents and Fellows being shared with other provider organizations to preserve the current number of GME slots available.

The GME programs should be carefully reviewed within each core department and subspecialty for appropriate size modification. To continue to preserve the slots, consideration should again be given in FY 2010 to spreading the programs across other provider organizations within HCSD and private organizations across the state or region who may provide the appropriate educational environment and receive a more lucrative Medicare reimbursement based on patient volumes.

The Hospital should be recognized for contributing an extra $9.5 million to GME in the state of Louisiana if the determination is made not to decrease the current size of the GME programs.

While the Hospital and the medical schools have previously evaluated and reassigned GME FTEs, current patient volumes suggest that another evaluation

for FY 2010 should be conducted to determine whether the current 300.24 FTEs are an appropriate core and subspecialty mix.

CONCLUSION

Given current volumes, the Hospital has the opportunity again to temporarily adjust the balance of GME slots as it has successfully done in the past. Reducing the Resident/Fellow FTEs by approximately 72 the Hospital could realize a direct cost saving of more than $9.5 million. This cost reduction may have a slightly negative impact on reimbursement revenue, but far less than the cost savings. However, if the determination is made not to modify the program structure at this time, the Hospital should be recognized as contributing that amount directly to Graduate Medical Education in Louisiana.

ADDITIONAL COST REDUCING INITIATIVES

ADDITIONAL COST REDUCING INITIATIVES

SUMMARY

▲ During this Assessment, other operating cost reductions were identified but in the interest of time were not sufficiently explored to determine their financial impact. These expenses include other purchased services, leases and rentals, maintenance contracts and staffing contracts.

RECOMMENDATIONS

▲ The Hospital's Administrative and Department Director leadership should develop the fiscally responsible discipline of reviewing all operating costs of the organization as part of the annual budget cycle.

BACKGROUND

As is outlined throughout this Assessment, our review and analysis focused on specific expense categories related to salaries, materials management, and graduate medical education programs, along with three core services of the Hospital, Nursing Services, Peri-Operative Services, and Outpatient Clinic Services.

FINDINGS

While reviewing the abovementioned areas, our team discovered additional areas were potential cost reductions should be explored. These areas need to be reviewed to determine ways to reduce or eliminate costs in light of patient volume.

RECOMMENDATIONS

The Hospital's Administrative and Department Director leadership should develop the fiscally responsible discipline of reviewing all operating costs of the organization as part of the annual budget cycle.

Administrative and Department Director leadership should constantly review financial and statistical data to determine whether:

1) Services are meeting the expectations of its patients;
2) There are ways that the Hospital can eliminate or reduce costs; and
3) The Hospital has the appropriate resources to manage daily activities.

By being vigilant fiduciaries, it challenges the Hospital's Administrative and Department Director leadership to be mindful of operating cost increases or providing support for service lines that offer minimal benefit to the Hospital's mission or patients.

One prominent example of a contract and cost for review and action is the current housekeeping contract for floor care with Employment Development Services. The original intent of securing this contract was to provide housekeeping staff needed to re-open the Hospital. However, over time the contract has not been reviewed to determine if the need exists for the service and/or whether local employees should be hired to replace the outside service.

The estimated cost of the contract in the current FY is over $2.6 million. If the Hospital hired staff to perform the same tasks, the estimated cost would be $1 million, representing an estimated savings of $1.5 million.

The Hospital should conduct a thorough review of department and account level financial data and payments to the top 100 vendors to identify other cost reducing opportunities. This review should involve the Department Director responsible for the service contract or expense line item, an Administrative and Finance representative, and/or those employees directly involved with the services provided.

At a minimum, the Hospital should consider conducting a thorough review of the following expense categories, currently projected to have an annualized cost over $16 million.

- ▲ Ambulance/Transportation;
- ▲ Equipment Rentals;
- ▲ Lease on equipment and real estate;
- ▲ Maintenance service contracts for equipment;
- ▲ Nurse, Clinical and other temporary agency staffing;
- ▲ Transcription services;
- ▲ Medical record storage/retrieval;
- ▲ Printing;
- ▲ Information Systems software contract services;
- ▲ Professional Services for other types of services.

CONCLUSION

The goal of this exercise should be to determine the appropriateness of the expense, identify a plan to reduce or eliminate the expense, establish a time-frame for implementing necessary changes, and identify a person responsible for implementation. Expectations would be for cost reductions in these areas of $5 million.

NURSING SERVICES

NURSING MANAGEMENT

SUMMARY

▲ There are approximately 126 nursing FTEs with administrative titles and without routine patient care responsibilities in inpatient services at the Hospital for an average daily census of 208, including nursery and Labor and Delivery.

▲ A restructuring of the Hospital's nursing administrative table would create a more efficient and accountable nursing department, resulting in lower costs and higher accountability.

RECOMMENDATIONS

▲ The Hospital must establish a new table of organization for nursing management that considers the present operation and potential future growth of the organization.

▲ The Hospital must consider a significant reduction in nursing management with a subsequent reallocation of work responsibility and accountability.

▲ The Hospital should establish a centralized nursing education function.

BACKGROUND

Salaries and benefits account for 40 percent of the Hospital's overall budgeted expenses in FY 2009 and nursing, with a higher than normal number of manager level nurses, represents a significant portion of these costs.

Of the 474 FTE inpatient nursing workforce, approximately 126 FTEs are in administrative positions, which means that roughly 25 percent of the total inpatient nursing workforce does not provide direct patient care. From all accounts, the current nursing configuration is a continuance of the model established in the original hospital system prior to 2005 and that has not been adjusted to account for a different physical plant or a significant difference in inpatient census.

Higher than normal levels of nurse managers leads to role conflict and less accountability throughout all positions with a significant cost to the organization. As the Hospital makes plans to construct a new facility, it is prudent to establish

the appropriate structure and levels of nursing management in inpatient services. Reconstruction of the table of organization and redefinition of responsibilities and accountability is necessary to not only decrease costs, but also increase productivity, potentially patient satisfaction, and ultimately quality throughout the nursing organization.

PROCESS

The review of nursing management began with a focus on the table of organization and the related salary and expenses inpatient services. This initial review was followed by interviews with the director of nursing, the associate nursing administrators, nursing supervisors, and a number of nurse managers. Discussions were held regarding their roles and responsibilities within the organization as well as the number of employees and span of control these positions are responsible for.

Rounds were made to all of the inpatient units and discussions were held with nurses in administrative positions as well as staff nurses. Additionally, patient charts were reviewed and patient care was observed on all inpatient units of the Hospital over a three-day period. Questions regarding daily challenges, daily routines, paperwork, and rounds with supervisory personnel were also discussed during this same time period.

During patient rounds, it became very evident that a significant majority of patients needed acute nursing care. Although there is no standard number of nurse managers and administrators to staff an occupied bed, consideration must be given for the patient population that the nursing staff must care for while considering the breadth and depth of nursing administrator responsibility and how much support is given from other departments and ancillary personnel.

In making rounds of the nursing units, it was found that even though some nurses have supervisory/administrative titles, they occasionally perform patient care. Reference in this case is given to the RN -- Supervisor 2 position. A high level nursing administrator stated that the majority of the time these positions are not given patient care assignments, but will take care of patients as necessary and as patient demand considerations are taken into account. In addition, the clinical coordinator position, also an administrative position, has a variety of functions assigned to it. One of these functions is staff education in specialty areas. These positions do not take patient care assignments.

When all variables are taken into account regarding the table of organization for nursing and comparing this even to the most liberal academic medical centers we find a structure that very top-heavy on the number of nursing administrators. We believe that the structure has emanated from a history of working in a large institution both from the patient population and facility design component to the temporary facilities after Hurricane Katrina and to today's interim facilities, with no consideration given to restructuring the nursing organization to fit current

needs. Our consideration for change in this area and recommendations will take into account the patient population, present conditions and potential future direction.

FINDINGS

Nursing Management

Position	FTEs	~ Cost
Associate Nurse Administrator	11	1,113,000
Nurse Manager	33	2,953,000
Clinical Coordinator	22	1,801,000
RN-Supervisor 2	60	4,998,000
Total	126	10,865,000

The Hospital is overstaffed in nursing management and administrative positions when compared to similarly positioned academic medical centers. The number of nurse administrator positions accounts for a ratio of one administrator for every 1.65 adjusted occupied beds ("AOB"). Taking into account the operating room and emergency department may increase this ratio to one administrator for every two AOB. These numbers do not include the ambulatory care facilities.

In addition to the above FTEs, there are 369.9 RN FTEs in inpatient services. At this ratio, there is nearly one RN administrator for every three nurses. This does not account for nursing assistants or other types of nursing aides in the organization. Even in heavily administrative organizations the normal ratio should be approximately 1-to-8.

In reviewing the responsibility and tasks of some of the nursing administrators, we found a significant overlap in the types of work that was being done throughout the course of the day. At one point in making rounds on the unit we found three separate administrators doing exactly the same task for the same patient at the same time. We observed a significant role conflict and questionable decision-making authority based on who was "in charge" of this particular situation. In another situation, we observed three different administrators working on placing patients in beds. In this situation, it was the same patient in the same bed.

On the other hand, when reviewing what scarce data was available on patient satisfaction and performance improvement, we found incongruence between the number of administrators/managers working at this facility and the level of patient satisfaction scores.

When interviewing administrative staff, we met no resistance from nursing personnel in discussing issues regarding their units. In fact, the nursing personnel of this facility seem to welcome the assistance and observations of external intervention.

We observed a caring and compassionate, yet frustrated, nursing staff. There is significant room for improvement in responsibility and accountability as well as support from administrative staff towards the staff nurses and primary caregivers

RECOMMENDATIONS

The Hospital must establish a new table of organization for nursing management that considers the present operation and potential future growth of the organization.

Due to the significant difference in operation between the old facility, the current interim facilities, and the potential growth, we recommend that the table of organization for nursing be established from the bottom up. This organization has gone through significant change in many ways. Therefore it would be difficult to use an iterative process to move from what is to what should be. We recommend that the nursing organization be looked at as a whole and constructed as if this were day one of a new operation.

The Hospital must consider a significant reduction in nursing management with a subsequent reallocation of work responsibility and accountability.

To accomplish this, the Hospital should conduct a detailed analysis of tasks, roles, and responsibilities within of all positions in all units. This will determine if tasks and responsibilities are commensurate with the appropriate levels of experience and education required to perform specific jobs. In some situations and units there may be a need to have more RN administrator personnel due to the types of patients and/or services provided in those particular areas. Distinct lines between direct and indirect patient care providers need to be established. Although flexibility in nursing staffing is a positive, the blurring of when a nurse with an administrative title is providing care or not can be confusing and difficult for nursing administrators to manage. Therefore, clarity, especially in the RN supervisor-2 role, needs to be established. A reduction of 64 FTEs among nurse with administrative titles is recommended, thereby reducing the overall costs of nursing management by $5.5 million. These saving could be realized by taking the following actions:

- ▲ Creating an administrative structure with a director of nursing and one associate director of nursing and eliminating all other associate nursing administrative positions in the inpatient area could result in a reduction of five FTEs.

- Consolidating and downsizing clinical coordinator positions and creating one central nursing education department and evaluating special educational needs as they arise could result in a reduction of approximately eleven FTEs.

- Reducing the nurse manager complement allowing one manager per each inpatient unit, increasing the administrative responsibility and accountability of these positions, and eliminating the day-house supervisor position, maintaining off shift and weekend coverage, could result in a reduction of approximately fifteen FTEs.

- Performing an evaluation of the RN-supervisor 2 role, maintaining some positions in specific specialty areas, while significantly reducing the FTE complement throughout inpatient services or considering direct patient care in a senior role for these positions could result in a reduction of approximately 33 FTEs.

The Hospital should establish a centralized nursing education function.

At present, there is no centralized nursing education function except those that exist within human resources. The human resource educators are charged with conducting orientation programs and fulfilling other educational needs when mandatory education is required by the nursing staff. In reviewing the clinical coordinator position, we find that one of their primary responsibilities is education. Yet the education that they provide is in very clinically-specific areas. When looking at the number of people that provide education and the outcomes that they provide we believe there could be better outcomes with less FTEs with the educational function centralized under one director.

In comparing the ratio of institution wide (non-unit based) educators to nursing department employees, we note that in teaching hospitals the ratio is 267 nursing department employees to one educator. In this Hospital, we are recommending a higher ratio than that based on patient population and acuity. Details of job scale and numbers of personnel need to be evaluated based on a reorganization of the nursing department.

CONCLUSION

A&M believes that by implementing the recommendations herein, the Hospital will not only reduce the nursing management by half but will establish an increased sense of responsibility and accountability by the nurses that hold these positions. This will demonstrate fiscal discipline while continuing to satisfy the mission of delivering exceptional and efficient healthcare to the community while educating future healthcare professionals.

A&M also believes that these recommendations will ultimately have a significant impact on patient satisfaction. By establishing an increased sense of accountability and responsibility in the direct management of the unit without a significant number of layers between the director of nursing and these unit managers, the patient care accountability will be held directly to the staff nurse with only one degree of separation from the director of nursing. Additionally, the establishment of a centralized nursing education function should lead to improved and consistent quality of care, higher satisfaction by the nurses, and ultimately higher patient satisfaction as well.

In order to realize this new model, the Hospital must commit to implementing a totally new structure. This will include organizing and designing current work role responsibilities of the nursing administrative staff as well as a significant change for 64 FTEs. We understand this initiative will take significant time and effort and will be challenged. However, we believe that the final product will ultimately be worth the effort in moving this Hospital toward the future. The table of organization of the Department of Nursing cannot be done without commitment from top leadership as well as management education and definition of role to all those who assume new and or expanded positions.

PATIENT CARE SERVICES

SUMMARY

- ▲ Inpatient care services account for approximately 35 percent of the salary cost for the Hospital.
- ▲ The overall delivery of patient care on the inpatient units should be re-designed to improve patient throughput, staffing ratios, nursing care models, and staff education. This will result in improved accountability, operational efficiencies, increased patient satisfaction, and cost savings.
- ▲ Ancillary and support care givers account for significant expenditures and need to be considered in a re-designed patient care model.

RECOMMENDATIONS

- ▲ The Hospital should redistribute patient placement in the facility to account for differences in acuity and length of stay by cohorting patients with similar medical conditions.
- ▲ The Hospital should develop a new staffing plan, nursing care delivery model, and scheduling/staffing control system considering all direct and indirect care givers.
- ▲ The Hospital should develop a quality improvement plan with realistic goals focusing on nurse sensitive indicators and core measures to assure an interdisciplinary approach to quality while putting organizational development training in place to enhance interdisciplinary relationships.
- ▲ The Hospital must perform a review of Pharmacy and Respiratory Therapy services that focuses on personnel, purchasing, distribution, and patient care.

BACKGROUND

Inpatient care services accounts for approximately 35 percent of total salary expenses, or approximately $50 million. Although inpatient care services costs

tend to be higher in academic medical centers, costs are higher than normal in this organization.

There are 681 FTEs of direct patient care givers for an average daily census of 200 patients at the Hospital. Including surgical services, labor and delivery, and emergency department volumes, the number of direct care FTEs is 18 to 25 percent which is approximately $10 million higher than other similarly sized organizations.

The Hospital maintains RN-to-patient ratios of 1-to-5 on most nursing units with the exception of OB/GYN which has a ratio of 1-to-6. Trauma and medical intensive care units maintain ratios of 1-to-2. These ratios are in line with the average for academic medical centers. With nursing ratios this high, there is less reliance on LPNs and nursing assistants. However, staffing for the Hospital includes the use of these personnel over and above RN staff.

Current staffing plans are a continuation of those used prior to Hurricane Katrina. As the Hospital makes plans to construct a new facility, it would be prudent to establish the appropriate levels and structure of nursing staff, nursing processes, and position control in the existing inpatient facility. Constructing a position control, developing a professional practice model, and redefinition of responsibility and accountability of nursing personnel is necessary not only to decrease costs, but also increase productivity, patient satisfaction, and ultimately quality throughout the nursing organization.

Respiratory Therapy and Pharmacy were briefly reviewed. Both inpatient and outpatient Pharmacy areas should be evaluated to determine the appropriate staffing levels necessary to provide for its extensive scope of service. The hiring of a pharmacy director is a critical step in this process.

There are an excessive number of Respiratory Therapists for the number of patients being treated both inpatient and outpatient. A closer review of this department will yield process improvement opportunities and staffing changes to match the level of treatments performed.

Nursing, Pharmacy, and Respiratory Therapy, make up the backbone of the inpatient care services delivery model. The integration and support of these departments would lead to improved patient outcomes and patient satisfaction.

PROCESS

The patient care services review focused on staffing ratios, skill mix, and daily staffing process. The Hospital is using an automated staffing system, called ANSOS One-Staff (“ANSOS”).

The first step in analyzing nurse staffing was to review a sample of the daily staffing plans. This document is produced by the ANSOS system and is utilized by the staffing office clerical personnel and house supervisors in making staffing

decisions within the nursing units. Staffing decisions are based solely on ratios and do not account for hours per patient day ("HPPD").

The report contains a detail of personnel, shifts worked, and skill level. From this report, nurse-to-patient ratios can be calculated, as well as total staff-to-patient ratios including direct and indirect FTEs. There is no position control for the detail to be of significant use. The Hospital uses a significant number of internal "pool" nurses who are per diem or PRN. Some are assigned to specific units; others are available to float to any unit. The unit assigned nurses are scheduled directly without input from the staffing office. Because of the lack of control over use of PRN nurses, there is a significant expense to the organization.

After reviewing the processes in the staffing office, we made rounds on each unit with the house supervisor. The supervisor was very knowledgeable and explained the process of patient movement and assignment of beds. Based on that discussion, we compared the listed staffing to actual staffing on the units. In addition, staffing ratios were compared to national academic medical center norms taking into account the uniqueness of the patient population, the environment, market competition, and patient acuity (Case Mix Index of 1.3104).

Patients with a length of stay greater than 20 days were examined to assess acuity levels. The purpose was to determine if these patients could be cohorted in one unit while evaluation, discharge, and placement issues were being resolved.

We reviewed quality assurance data from nursing as well as the nurse sensitive indicators being measured by the units that included: 1 to 1 observations, patient falls, restraint occurrences and documentation, and acquired pressure ulcer rates. This data is being maintained by one nurse executive in the Hospital who created the "system" It is a spreadsheet with data being entered regularly, often daily, by individual nurse managers. This nurse executive works diligently to maintain the data integrity and does this without clerical support. Hospital-wide quality or core measures were not evaluated at this time.

FINDINGS

Inpatient Care Services
Interim Hospital

Position-Staffed		FTEs		~ Cost
RN- Full Time		369.9	$	30,022,582
LPN		104.8	$	4,494,298
Nurse Asst.		152	$	4,054,790
Admin Coord.		94	$	2,800,641
Psych Aide		55	$	1,460,220
Pt. Escort		22	$	469,326
Respiratory Therapist & Supv		61	$	3,470,000
Pharmacists/Pharm Techs		39	$	2,929,374
	Total	**897.7**	**$**	**49,701,231**
* Salary varies on use				
Pool Nurses*		173.6		

Staffing-Inpatient Units (RN and LPN)

The staffing process is influenced not only by the shift, personnel available, and nursing unit, but also the person performing the staffing function. The use of staffing ratios needs to be re-evaluated as these were established eight years ago and may be outdated based on changes in patient volume and acuity. Most hospitals have moved to staffing by hours of care per patient day which allows a measure of delivered care taking into account all direct care givers. The use of ratios discounts any help from ancillary or other personnel, such as respiratory therapists assigned full time to units, nurse aides, and LPNs. The benchmark staffing ratios and the patient acuity need to be matched to maximize efficiency and improve patient care.

Considering the ratios and the number of personnel, there are significant variances in the quality measures. The restraint episodes, falls, and acquired pressure ulcer rates are high considering national standards from the National Database of Nursing Quality Indicators ("NDNQI"), patient acuity, and length of stay. Length of stay for several patients is an issue that effects staffing and throughput. On the day of rounds there were 30 patients with lengths of stay over twenty days, five on psychiatry, and an additional 28 with length of stay over ten days. Considering the patient population and severity of illness, this accounts for approximately 30 percent of inpatient volume which is higher than expected.

Reported data indicates a length of stay ("LOS"), excluding psych and nurseries, of 5.4 days. Throughput and excessive LOS were discussed with nurse administrators, which began another conversation regarding total patient care issues, including physicians. The patient management process and professional relationships between the nursing staff and physicians can be described as strained. This relationship leads to poor patient satisfaction and potential quality issues, including high restraint episodes, falls, and acquired pressure ulcers.

Ancillary Personnel (NA, Psych Aide, Pt. Escort, Admin Coordinators)

Ancillary personnel in the Hospital provide functions related to nursing aides, patient escorts and administrative duties. These FTEs are not recognized in the staffing grid, and the model of nursing care does not always give them an assignment to work directly with one nurse unit. Since the ancillary personnel account for about 300 FTEs, a nursing model of care that includes these FTEs should be developed to better utilize their skills and provide an increased level of patient care.

When reviewing patient satisfaction evidence, nursing assistants are having significant positive impact on outcomes. Although it covers a multitude of job functions, the title of administrative coordinator is primarily secretarial. It was difficult to understand the nursing unit location of these FTEs because of the lack of position controls by unit. Patient movement, escort services, and the admission discharge transfer process ("ADT") need to be evaluated as they are not consistent 24 hours per day seven days per week.

1-to-1 Patient Coverage

The statistics for 1-to-1 observations in the Hospital were reviewed for the last quarter of 2008 and found to average six patients per day. Although within normal limits, concerted effort to eliminate or reduce these by half should be undertaken since they require significant allocation of resources.

Respiratory Therapy

There are over 60 FTEs in the respiratory therapy department. This department needs an in-depth analysis of its operation, tasks and coverage expectations. In a conversation with nurse administrators, staff nurses, and a respiratory therapist, it appears there are opportunities to improve work flow and realize cost savings with better utilization of staff.

Pharmacists

The amount of drug orders and prescriptions filled by inpatient and outpatient Pharmacy is large. In six months 245,000 prescriptions were filled and 1.14 million unit doses were dispensed. Additionally, there were 31,000 admixtures. The patient volume for this same time period was 31,000 patient days, 57,600

clinic visits, and 31,000 ED visits. When comparing units dispensed to patient volume, this equates to eleven pharmacy interventions per statistic. A complete evaluation of pharmacy services, including purchasing, process, and distribution should be completed to determine ways to improve service and reduce costs.

RECOMMENDATIONS

The Hospital should redistribute patient placement in the facility to account for differences in acuity and length of stay by cohorting patients with similar medical conditions.

By cohorting patients with similar conditions, staffing ratios and skill mix can be adjusted to account for patient needs, including rehabilitation, physical therapy, and others services provided by ancillary support staff. Additionally, length of stay can be managed allowing better throughput and increased quality outcomes for those patients requiring more acute services. Shorter LOS will also result in reduced patient complications and adverse outcomes.

The Hospital should develop a new staffing plan, nursing care delivery model, and scheduling/staffing control system considering all direct and indirect care givers.

After consolidating patients by type/acuity, a new staffing model needs to be developed along with position controls and management. There are a significant number of indirect care givers on the units whose role and job function need to be evaluated and addressed. It is our recommendation that an HPPD model be put in place to account for all care received by the patient. This will lead to better patient and staff satisfaction and increase accountability among staff with direct care responsibilities. With these changes, there is potential cost reduction of approximately $8 million. Budget responsibility should be given to first line nurse managers after proper education and training on the new system and related budget reports. Currently, there is little knowledge of the finance process and concepts throughout the nursing units. This is an important educational need for the Hospital.

The Hospital should develop a quality improvement plan with realistic goals focusing on nurse sensitive indicators and core measures to assure an interdisciplinary approach to quality while putting organizational development training in place to enhance interdisciplinary relationships.

Quality indicators are in place; however the system of measurement and recording data leaves much room for error. In reviewing outcomes, there is

significant room for improvement in the nurse sensitive indicators. By putting together an interdisciplinary quality management system, outcomes will be better measured and patient care will improve. Simultaneously, implementing a training team and change management will lead to better collaboration among the staff.

The Hospital must perform a review of Pharmacy and Respiratory Therapy services that focuses on personnel, purchasing, distribution, and patient care.

These two departments account for a significant amount of expense both personnel and supply cost. An in-depth analysis and work plan needs to be put in place to improve work flow, streamline processes and identify cost savings for supplies and personnel.

CONCLUSION

Implementing these recommendations will increase patient satisfaction, quality indicators and improve staff morale. As nurse leadership is educated on the financial implications of decisions, there will be a greater sense of fiscal responsibility.

The potential cost reductions with a revised nursing care model, new staffing plans and scheduling process are estimated to be $ 8 million. This does not include any cost reductions available after an intense review of Pharmacy and Respiratory Therapy services. Development of a new nursing care model should be integrated with implementation of other recommendations in a hospital-wide process improvement project. The impact of this change will ripple throughout the organization and will require communication and training, to realize the full benefits of this recommendation.

CASE MANAGEMENT

SUMMARY

- There are approximately 33 RN and Social Workers FTEs in the Case Management Department assigned to the inpatient area and the Emergency Department.
- Although the social and discharge needs of the Hospital's patient population are acute and continuous, there should be a restructure of tasks with a potential reduction of 25 percent of salary cost.

RECOMMENDATIONS

- The Hospital should re-align position controls in Case Management to reflect the current average daily census and add administrative positions to relieve clerical functions from clinical staff.

BACKGROUND

The Hospital's patient demographics require an aggressive case management model to ensure resources are available to meet the needs of the patient. This includes not only the care received in the hospital but coordination of follow-up on discharge plans. The department is tasked with not only dealing with the patient but also assisting nursing and physicians with the execution of the plan of care, spouse and family members for social or discharge needs and community providers for follow-up care.

PROCESS

The review of Case Management consisted of examining the role of RNs and Social Workers in the department and interviewing personnel on nursing units. A review of the paperwork flow for the department was conducted. In addition, discussions were held with administrative personnel about the role and function of the department. While everyone agrees the department has a difficult role, there are opportunities to change processes with improved outcomes for patients and Hospital staff.

FINDINGS

A review of the roles and functions of RNs and Social Workers indicates a duplication of efforts in daily tasks and that they are encumbered with clerical

tasks that take time away from patients. The department typically assigns RNs and Social Workers to every nursing unit to ensure patients are seen on a frequent basis. The department has 33 FTEs with thirteen RN positions and eighteen Social Workers. In a hospital setting, RN caseload is 35 patients per day and Social Worker caseload is twenty patients per day. With the Hospital average daily census of approximately 200 patients, the department is underperforming in managing daily patient caseloads by about 25 percent.

RECOMMENDATIONS

The Hospital should re-align position controls in Case Management to reflect the current average daily census and add administrative positions to relieve clerical functions from clinical staff.

Based on average caseload for RNs, Social Workers and to accommodate the clerical functions of the department, there should be six to seven RN positions, ten to twelve Social Worker positions, two to three Administrative Coordinators, and a Department Director. With this staffing complement, the department will eliminate ten positions and a cost reduction of approximately $400,000.

The Hospital should also evaluate and restructure the daily tasks of Case Management to improve work flow and paperwork processes. The goal should be to ensure RNs and Social Workers are able to spend more time working with patients and families and reduce administrative and other time-consuming tasks.

CONCLUSION

After successful implementation of this recommendation, the Hospital should realize an improvement in physician and nurse staff relationships related to case management functions and higher patient and family satisfaction with outcomes from their Hospital admission. This is in addition to the $400,000 cost reduction for staff reductions.

EMERGENCY DEPARTMENT

SUMMARY

- ▲ The Emergency Department ("ED") serves as a vital lifeline to the community providing trauma care, emergent care, and Fast Track care for over 60,000 patients annually. Because of type of care, staffing and other costs, it is one of the high cost departments in the Hospital.
- ▲ There is an opportunity to reduce costs by approximately $2.35 million by improving work flow and reducing the physical size of the ED.

RECOMMENDATIONS

- ▲ The Hospital must implement an in depth process improvement ("PI") plan for the ED in order to improve throughput and patient care, and reduce costs.

BACKGROUND

The Emergency Department ("ED") serves as an urgent and primary care center for a significant portion of the population of New Orleans. This is accounted for by the fact that 85 percent of the 60,000 annual ED visits are discharged from the ED and over 50 percent of the visits are considered "Fast Track" with a lower acuity level. Approximately 15 percent of the visits result in admissions to the Hospital and those represent about 60 percent of the Hospital's admissions. The ED has a very large physical layout consisting of 53 examination spaces (beds/chairs). It has approximately seven non-physician caregivers per hour on duty when the national average is 2.6.

The door-to-doctor time is reported as two hours, including Fast Track and Rapid Treatment Area ("RTA") patients. In reality, it is closer to three hours with more acute patients. The size of the ED has increased because of poor processes and patient turnaround times ("TAT"). To accommodate more patients, the ED has expanded both personnel and space instead of improving processes. Physical plant and processes need to be evaluated at a more detailed level to improve TAT and patient throughput.

PROCESS

To evaluate the ED, we spent time observing and following patients through the emergency system. Additionally, we interviewed the nurse manager and ED physician directors. Both of these people were very knowledgeable and cooperative and are working to improve service to the patients. We also reviewed internal systems, such as triage, RTA, Fast Track, mental health, and acute care. As we followed patients through the treatment process, we reviewed charts and talked with physicians and nursing staff. Overall, the ED staff works hard, but it appears to lack internal and supporting external systems to properly and quickly disposition patients through the system.

Ambulance TAT is twice the norm expected by the EMS system and this may reduce the number of ambulances coming to the facility. Data that we received from the ED was compared to national benchmarks.

FINDINGS

The ED's physical layout is too large, it is overstaffed, and it has excessive TAT.

The size of the ED exceeds national benchmark of one patient exam room per 2,000 visits; the ED has about 20 beds over this standard.

There is an emergency observation area staffed for ten patients per day, but that has a volume of approximately three patients per day. The national benchmark for non-physician providers (including nurses, aides, and clerks) is 2.6 hours per patient visit, whereas this ED is at approximately seven hours per patient visit.

Ambulance TAT is double the regional standard of twenty minutes; this was confirmed by the Nurse Manager. This may account for EMS services choosing other facilities for a quicker TAT.

An observation made by the Associate Medical Director indicated significant delays, sometimes months, in getting patients follow-up clinic appointments. This leads to repeat visits by those patients to the Hospital's ED.

ED salary costs, without physician staff, are approximately $8 million. This cost could potentially be reduced by 30 percent with improved work flow and patient flow process changes.

RECOMMENDATIONS

The Hospital must implement an in depth process improvement ("PI") plan for the ED in order to improve throughput and patient care, and reduce costs.

Since the ED is a critical source for Hospital admissions and is a Level I Trauma unit, throughput and capacity management is a priority on a daily basis. Initiating a PI team should include representatives from nursing and ancillary departments in addition to ED clinical and physician staff. The team should establish goals and timelines for various stages of the PI project and have a strong communication plan with the entire organization – staff and physicians. There should be progress reports to Administration and medical staff which indicate success of each stage, what adjustments have been made to the PI plan and on-going key indicators to ensure that a hard-wired solution is being achieved. The PI team should request feedback from constituents to understand impact of changes to the entire organization.

The Hospital should expect results within 90 days and significant cost savings at the end of six months.

CONCLUSION

The Emergency Department is one of the most critical departments in the Hospital. The issues that impact the ED ripple through the entire organization. The implementation of the PI project team with strong leadership and accountability to Administration for results will not only realize significant cost reductions of $2.35 million but will improve throughput, capacity management, patient and physician satisfaction and community perception.

PERI-OPERATIVE SERVICES

PERI-OPERATIVE SERVICES

SUMMARY

- ▲ Until August 2005, surgical patients were previously serviced by two hospitals with a total capacity of 25 operating rooms ("OR"). The current OR configuration has a maximum capacity of twelve rooms.
- ▲ Surgical volume has continued to grow during the last eighteen months since the re-opening of the former University Hospital and it is assumed that additional demand is there provided the Hospital can create capacity.
- ▲ OR capacity is constrained due to physical plant limitations and the inability to recruit qualified and experienced nursing staff to keep pace with demand.
- ▲ The Hospital's Peri-Operative departments have consolidated nursing staff from two different hospitals and are still adding new and sometimes inexperienced personnel. Thirty percent of the OR nursing staff is new and many have no prior OR experience.
- ▲ Average prime time utilization of the OR is at 55 percent (without turnover), which is 15 to 25 percent lower than industry standards, due to a varied number of controllable and non-controllable reasons.
- ▲ Operational logistics prior to and on the Day of Surgery are hindering the OR's overall efficiency and delaying start and turnover times.

RECOMMENDATIONS

- ▲ The Hospital should establish resource management policies and goals with regard to utilization for its OR capacity, aiming for an overall utilization target of 75 percent without turnover.
- ▲ The Hospital should create additional capacity by more effectively utilizing its ORs during prime time, and thereby increasing case volume.
- ▲ The Hospital should create additional capacity by scheduling cases in the late afternoon or early evening.
- ▲ The Hospital should create OR capacity by changing the location of certain procedures to the bedside on the unit.

- ▲ The Hospital should consider developing a separate facility dedicated exclusively to outpatient surgery, provided the demand can be substantiated and payer mix is considered.
- ▲ The Hospital should implement policies and reporting systems to increase effective utilization of block time.
- ▲ The Hospital should conduct an in-depth and comprehensive review of staffing levels and labor productivity metrics to identify cost reducing opportunities.
- ▲ The Hospital should develop and/or enforce compliance with scheduling protocols and training for Residents to improve OR scheduling.
- ▲ The Hospital should develop a plan to determine those resources required to increase EAC volume.
- ▲ The Hospital should aim to create a system for assembly of case carts and preparation of ORs the evening prior to surgery.
- ▲ The Hospital should develop a work plan to monitor the use and availability of instrumentation to ensure both service mix and volume are not impacted by the availability of instrumentation.
- ▲ The Hospital should develop a work plan to conduct a comprehensive throughput review by hour-of-day to evaluate productivity, capacity, and identification of gridlock times with potential solutions.
- ▲ The Hospital should develop standardized policies and processes with regard to higher levels of communication between the RN/CRNA Board Runner team and the intra-op staff to improve turnover and start times.
- ▲ The Hospital should develop a work plan to improve the quality of data capture and the reporting/use of key metrics to manage performance and improve throughput.

BACKGROUND

Until August 2005, surgical patients were previously serviced by two hospitals with a total capacity of 25 operating rooms ("OR"):

- ▲ Charity Hospital utilized fifteen Operating Rooms and
- ▲ University Hospital staffed ten Operating Rooms.

Currently, the Hospital's OR has a maximum capacity of twelve rooms: ten rooms utilized for inpatient and elective cases, one dedicated room for trauma/emergent cases and one room for cystology cases only.

The Hospital is a Level-One Trauma Center and, inasmuch, organizes its surgical services program around trauma services with dedicated Operating Room Suites ("ORS") and dedicated experienced staff members on the Surgery Service and Nursing Department.

Operating Room Capacity

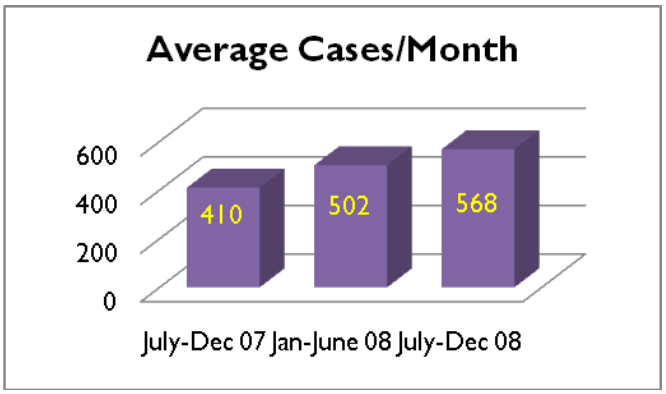
Case Type	Combined Previous 2 Hospitals	Interim Facility	New Facility
Inpatient & Elective	25	10	15
Trauma/Emergent		1	
Cystology		1	
Outpatient		-	8
Cardiac Catheterization		-	4
Interventional Radiology		-	4
Total	**25**	**12**	**31**

The current plan for the surgical capacity in the replacement hospital includes 23 ORS (fifteen dedicated to inpatients, cardiac and trauma patients and eight for outpatient cases), four cardiac catherization rooms, and four rooms for interventional radiology.

As the Hospital moves forward, it must meet the challenge of continuing to expand capacity to meet growing demand, while serving its educational mission

by providing enough OR time for Attending Physicians and Residents of LSU School of Medicine and Tulane School of Medicine within the current facility.

Volume Trend

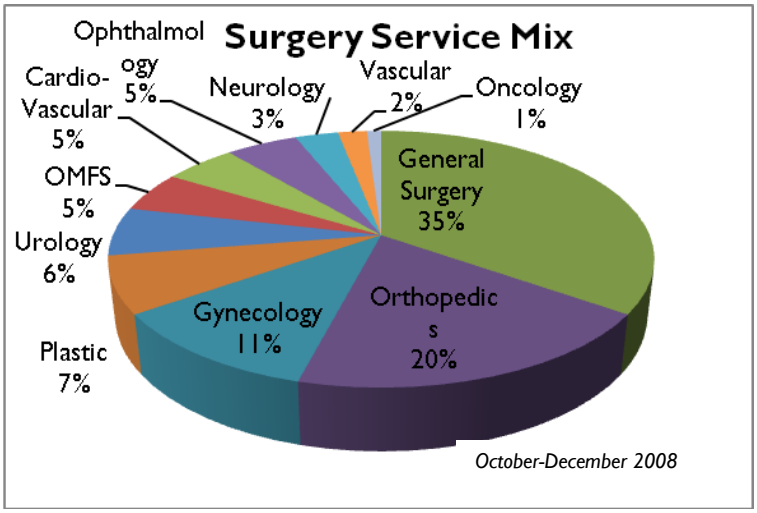


Case volume has continued to build during the past eighteen months, growing at the rate of thirteen percent from January 2007 to July 2007 to July to December 2008. Based upon fiscal year to date ("FYTD") December 2008, annualized surgical volume is projected to be 6,800 cases. There is an unmet demand for more OR time on the part of many LSU surgical specialty clinics, the Tulane program, and within the community serviced by the Hospital.

Currently 60 percent of the surgical cases are inpatient and/or emergency patients; and forty percent are ambulatory surgical cases. There is an assumption that the ambulatory surgery market share can be increased if additional OR time is available for scheduling more elective cases.

Based upon calendar year to day ("YTD") through August, 2005, Charity Hospital had annualized surgical volume of 5,600, and University Hospital had annualized surgical volume of 4,700.

Service Mix

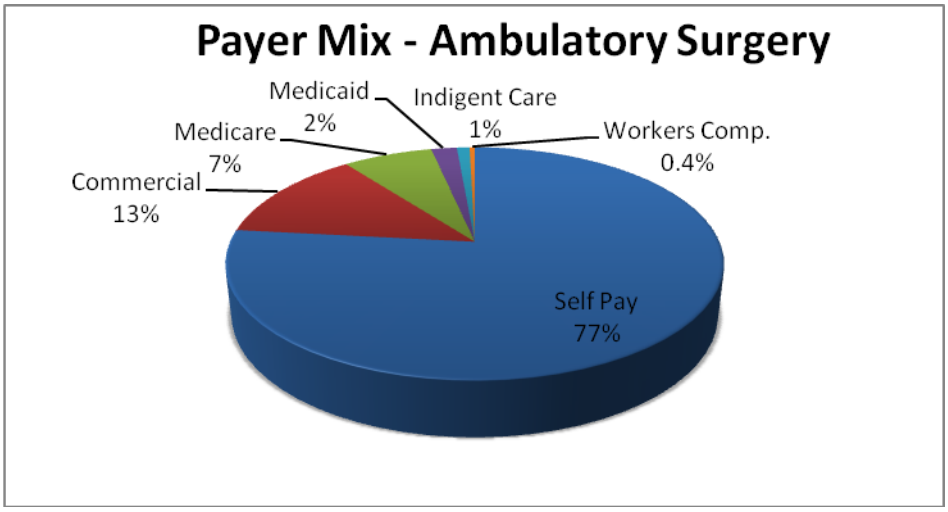


General Surgery, Orthopedics and Gynecology ("GYN") account for 64 percent of the surgical volume. Neurosurgery and ENT services will soon be scheduling surgical cases within dedicated block time to provide more elective case scheduling capacity and case volume from these services is expected to grow. The Orthopedics service has expressed a need for more OR capacity to schedule ambulatory cases such as arthroscopic knee procedures and other sports-medicine cases. GYN, Plastics, and Vascular services also claim to have a

backlog of cases which they are unable to accommodate within their block schedule due to more urgent and emergent case loads.

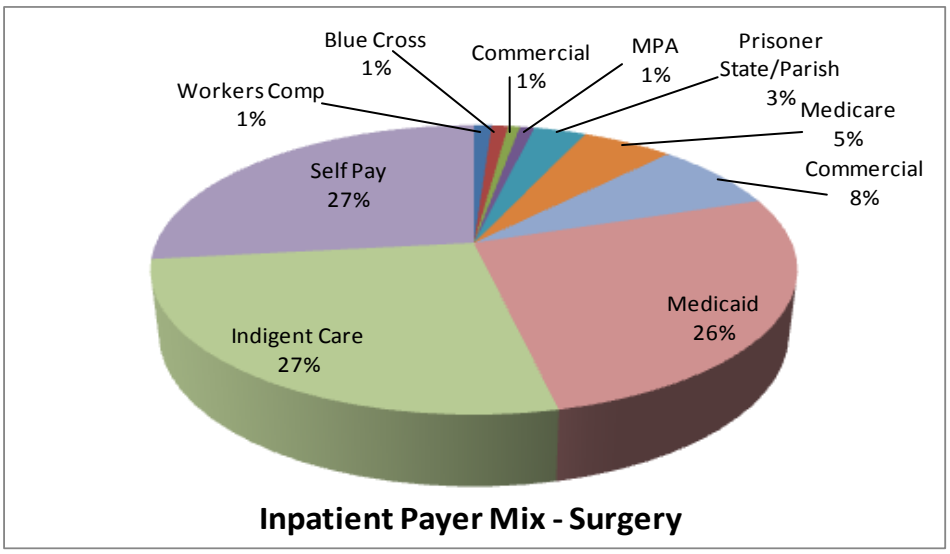
Payer Mix

Of the Ambulatory Surgery cases – 77 percent were Self-Pay and thirteen percent have a commercial payer source.



Of the Inpatient Payer Mix for Surgical Services, greater than 50 percent are Indigent and/Self Pay.

Medicaid represents another 25 percent of total cases.



PROCESS

The A&M team conducted a review of the Peri-Operative Services at the Hospital to identify operating efficiencies and opportunities to improve throughput and expand capacity.

This Assessment was completed through interviews with key stakeholders, onsite observations of key work processes and extensive data analysis of available standard and ad hoc reports from the OR information system and other regular performance improvement ("PI") reports produced by various departments, select policies, and OR Committee Minutes. Where reliability/credibility of data was questionable, A&M used manual data collection and interpretation for sample day and week periods for real time measurement of key performance metrics.

FINDINGS

While the delivery of care in the OR is dependent upon availability of physical space, equipment and supplies, and personnel, there are three key stakeholder groups who influence operating efficiency and impact throughput. These stakeholders include:

- ▲ Nursing teams who provide pre-op, intra-op and post-op care;
- ▲ Anesthesia staffing, including Anesthesiologists and Certified Registered Nurse Anesthetists ("CRNA"); and
- ▲ Surgeons (including Residents).

While Surgeons are also customers, they play an integral role, as Stakeholders, by managing logistics prior to the Day of Surgery through effective management of scheduling and appropriate documentation of consents, history & physicals ("H&P"), orders, and ensuring pre-admission testing and medical optimization as well as providing patient education about Day of Surgery requirements and logistics.

Patients, while also customers of the OR, could be considered a fourth stakeholder as they may also have an impact on Day of Surgery by arriving on time and following all pre-surgical instructions and medical optimization guidelines. Patients sometimes are responsible for Day of Surgery cancellation or delay.

Other personnel that support OR operating efficiency and can expedite or delay start times and/or throughput and room turnover are:

- ▲ Hospital ancillary and support staff ;
- ▲ Environmental Services;
- ▲ Central Sterile;

- ▲ Radiology;
- ▲ Lab;
- ▲ Materials Management; and
- ▲ External vendors critical to a particular case.

Staff members within the Peri-Operative Departments were observed to be dedicated to providing the best standard of care for the patient and work in a patient-focused environment. The care delivery system works well due, in part, to the efforts of experienced and long-tenured staff. In some instances, the system is more reliant on the experience and dedication of a particular individual(s) rather than on consistency of standardized work processes. These areas are identified throughout the separate findings of different functional areas further in the report.

Capacity and Resource Management

The physical plant determines surgical capacity with a limited number of OR suites. In addition, staffing resources may be limited due to budgeted FTEs and/or availability of qualified nursing and/or anesthesia personnel. Further, equipment and instrumentation needed for the specific case mix may limit OR capacity when ample supplies are not available and/or in good condition. All of these resources need to be appropriately planned and managed to attain utilization goals.

The OR at the Hospital has limited capacity today due to both the physical plant and nursing staff.

Capacity

Physical-space constraints are a limiting factor in creating additional prime time OR capacity. While there are twelve rooms within the OR, not all twelve rooms can be scheduled for elective cases. One room must be dedicated for Emergent/Trauma cases 24 hours, seven days per week. One is used primarily for cystology procedures and some rooms are just not suitable for all types of cases due to size of room. Rooms generally used for ophthalmology, for instance, would not be suitable for larger cases, and, therefore, further constrain total capacity.

Prime time has been identified as 7:00 a.m. to 3:00 p.m. Monday through Friday. It is assumed that there are 4,800 minutes (eight hours times ten rooms) of surgical time available during prime time on Tuesday, Wednesday, Thursday and Friday for all but Trauma and Cystology services. On Mondays there are 4,200 minutes (seven hours times ten rooms; one hour is dedicated to in-service staff education) of surgical time available during prime time.

Throughput per Room			
Case Type	University Hospital	Charity Hospital	Interim Hospital
Annualized Cases	4706	5661	6814
Rooms	10	15	12
Average Cases/Month	392	472	568
Avg. Cases/Month/Room	39	31	47

The current projected volume at LSU Interim Public Hospital represents a significant increase in throughput over previous annual volume at the same facility pre-Katrina. While there is an increase in number of rooms/capacity, there is also a significant increase in throughput per room.

Utilization Goals

A policy with clearly stated goals for utilization of prime time or required utilization of block time does not appear to exist at the Hospital. Widely accepted industry standards for prime time utilization goals are in the area of 70 to 80 percent without turnover time factored into utilization calculation.

Below is a current utilization analysis developed using data from internal reports received from the OR Management Team (manually collected and electronic reports from the OR IT system). This analysis indicates and supports the observation that there is opportunity to increase utilization during prime time. As is demonstrated, the average utilization during this period was 55 percent.

Prime Time Utilization WITHOUT Turnover Time						
	October-November			December		
	Block	8 Rooms	9 Rooms	Block	9 Rooms	10 rooms
Monday	8+1	60%		10+1		50%
Tuesday	9+1		58%	9+1	55%	
Wednesday	8+1	57%		9+1	50%	
Thursday	9+1		56%	9+1	57%	
Friday	8+1	56%		9+1	46%	

Monday: 8:30 a.m. start - rooms run @ 7 hours

No turnover was factored into the calculations above. Some days with low utilization during the holidays were not included in this analysis and, therefore, December represents a smaller period.

Actual rooms running may have been greater than number of blocked rooms (blocked assumed to be "staffed") on a particular day, if the Trauma/Emergency Room was utilized. If so, those cases and minutes are factored into the prime time calculations above, and therefore utilization may be overstated because capacity was increased through use of another room.

Our analysis and observation of the sample period of October 2008 to December 2008 indicates the average case volume is two and a half cases per room on any given week day.

Average Case Stats/Day of Week - October - December 2008

	Day	Total # of Cases	Avg Mins/Day of Week	Avg Mins/ Case	Avg Case/ Room (10)
Totals by Day	Sunday	7	812	123	
	Monday	23	3,502	155	2.3
	Tuesday	27	3,941	146	2.7
	Wednesday	27	3,835	143	2.7
	Thursday	24	4,354	184	2.4
	Friday	23	3,495	150	2.3
	Saturday	6	803	125	
	Totals for Period	137	20,741	152	

Does not include holidays

Block Time

Block time is allocated to a service – separately for LSU School of Medicine and Tulane School of Medicine programs – and is managed by the service as to utilization including prioritization of elective and emergent cases.

Block time utilization was calculated and reported to the OR Committee up until 2005 when both Hospitals were open. This reporting is currently not viewed as a useful exercise as there are some questions regarding data integrity, and the report creation requires extensive manual manipulation. Historically, there were no driving and compelling reasons to aggressively manage utilization as the physical space capacity was ample to support both elective scheduling and emergent/trauma type cases into the daily activity.

In order to meet the demand for increased and new block time as requested by various services, the block time schedule will occupy even more of the currently available capacity and by March 1, 2009, block time will account for 95 percent of the prime time schedule. Even at these levels, management is unable to accommodate additional requests from Oral and Maxillofacial Surgery ("OMFS"), General Surgery (Tulane) and GYN (Tulane) services.

	WEEKLY BLOCK SCHEDULE - JANUARY 1, 2009				
	Mon	Tues	Wed	Thurs	Fri
ROOM 1	CT LSU	CT LSU	CT LSU	CT LSU	CT LSU
ROOM 2	GYN ONC LSU	GENERAL LSU	OPEN	OPEN	CT/GSLSU
ROOM 3	GYN LSU	GYN LSU	GYN TUL	GYN TUL	GYN LSU
ROOM 4	ORTHO TUL	ORTHO LSU	ORTHO TUL	ORTHO LSU	ORTHO LSU
ROOM 5	ORTHO TUL	ORTHO LSU	ORTHO TUL	ORTHO LSU	ORTHO (H/F) LSU
ROOM 6	OPEN	OPEN	OMFS LSU	OMFS LSU	OPEN
ROOM 7	LSU VASCULAR	GENERAL LSU	GENERAL LSU	GENERAL LSU	GENERAL LSU
ROOM 8	TRAUMA	TRAUMA	TRAUMA	TRAUMA	TRAUMA
ROOM 9	UROLOGY LSU	PLASTICS LSU	UROLOGY LSU	PLASTICS LSU	UROLOGY TUL
ROOM 10	NEURO TUL	OPEN	OPEN	NEURO TUL	OPEN
ROOM 11	OPHTH LSU	OPHTH TUL	OPHTH TUL	OPHTH LSU	OPHTH TUL/LSU*
ROOM 12	CYSTO LSU	OPEN	CYSTO LSU	OPEN	CYSTO LSU
Rooms Run	**10+1**	**8+1**	**9+1**	**9+1**	**9+1**

Actual Weekly Block Schedule from January, 2009. At this time, ten blocks were open.

	WEEKLY BLOCK SCHEDULE - MARCH 1, 2009				
	Mon	Tues	Wed	Thurs	Fri
ROOM 1	CT LSU	CT LSU	CT LSU	CT LSU	CT LSU
ROOM 2	GYN ONC LSU	GENERAL LSU	OPEN	NEURO LSU	CT/GSLSU
ROOM 3	GYN LSU	GYN LSU	GYN TUL	GYN TUL	GYN LSU
ROOM 4	ORTHO TUL	ORTHO LSU	ORTHO TUL	ORTHO LSU	ORTHO LSU
ROOM 5	ORTHO TUL	ORTHO LSU	ORTHO TUL	ORTHO LSU	ORTHO (H/F) LSU
ROOM 6	ONC (Wey)	ENT LSU	OMFS LSU	OMFS LSU	ENT LSU
ROOM 7	LSU VASCULAR	GENERAL LSU	GENERAL LSU	GENERAL LSU	GENERAL LSU
ROOM 8	TRAUMA	TRAUMA	TRAUMA	TRAUMA	TRAUMA
ROOM 9	UROLOGY LSU	PLASTICS LSU	UROLOGY LSU	PLASTICS LSU	UROLOGY TUL
ROOM 10	NEURO TUL	NEURO LSU	NEURO LSU	NEURO TUL	NEURO LSU
ROOM 11	OPHTH LSU	OPHTH TUL	OPHTH TUL	OPHTH LSU	OPHTH TUL/LSU*
ROOM 12	CYSTO LSU	OPEN	CYSTO LSU	OPEN	CYSTO LSU
Rooms Run	**11+1**	**10+1**	**10+1**	**10+1**	**11+1**

Projected Weekly Block Schedule for March, 2009. At that time, open blocks will decrease from ten down to three.

Staffing – Nursing

The Peri-Operative Departments have consolidated staff from two different hospitals – one with a trauma service focus and one with a typical service mix – and is still assimilating new, and sometimes inexperienced, personnel. Currently, 30 percent of the OR nursing staff is new and many have no prior OR experience.

Nursing Administration reports that it has been difficult to recruit nurses since re-opening the Hospital, particularly for surgery, and they have been dependent upon heavy utilization of agency and travelers in order to staff to full complement.

While the staffing level is close to the required complement, there are still fifteen nurses in orientation (which generally includes three weeks of didactic training and three to six months of practical training).

The reality of these staffing challenges limits the Hospital's ability to create additional capacity by extending the day. The goal is to recruit and train the adequate staffing levels of Registered Nurses ("RN") and Scrub Techs required to run five (plus one trauma) rooms beyond prime time until 7:00 p.m. This would provide additional capacity of eight to twelve hours per day, assuming that on average two to three rooms are currently running beyond 3:30 p.m.

Logistics Prior to the Day of Surgery

While the pace and operating efficiency of the Day of Surgery is influenced by multiple factors, effective scheduling protocols, and adherence to pre-surgical testing guidelines are generally implemented to avoid unnecessary problems on Day of Surgery and reduce delays and cancellations.

Posting/Scheduling Cases

There are two Surgical Schedulers located within the administrative offices adjacent to the core of OR suites who are readily accessible to Surgeons who want to schedule cases. Our observation of this key work process revealed that the individuals appear to understand the policies and procedures of posting cases and the supporting technology. Block time was established in the electronic schedule so scheduling staff can readily access information on which service can post cases by day of week.

The surgical schedule is posted and managed by the Residents of each service. The effectiveness and efficiency of managing the service's block time, posting of cases, and managing the Day of Surgery schedule seems to vary widely among surgical services.

The process includes completion of a paper "booking sheet" by the physician requesting case time on the schedule – whether or not the case is within the block time. This policy should continue to be enforced and monitored for quality of information that is provided by the physician booking a case.

The process for posting elective cases has recently been revised to require "proof" of completion of pre-surgical guidelines – which includes receipt of orders, consent and H&P – from the physician, as well as confirmation that the patient has completed pre-surgical testing by the Elective Admissions Clinic ("EAC"). It was reported that until this policy was instituted, many cases were cancelled or delayed Day of Surgery due to incomplete pre-surgical requirements and/or

patient-driven due to lack of appropriate education provided to the patient by their physician and/or EAC.

This policy/process is often standard operating protocol for most hospital surgery programs and often results in a direct-correlation to lower cancellation/delay rates.

There does not appear to be a policy or standardized process for posting cases to average historical case time, guidelines for posting a maximum number of major/minor cases, nor scheduling elective case load in anticipation of emergencies. Cases are, in fact, not posted within a reasonable or realistic time frame for each day based upon anticipated average time per case or to any other guideline. Residents/Attending Physicians of the service are able to post as many cases as they want regardless of reality of ability to complete all within prime time (7:30 a.m. to 3:00 p.m.). It was reported that the practice of "overbooking" has evolved due to the high percentage of cancellations and changes to the surgical schedule on Day of Surgery.

The practice of overbooking not only adds to the inefficiency and can create chaos in running the Day of Surgery schedule, but impacts patient satisfaction. Lack of adherence to appropriate scheduling protocols directly impacts patients when they are delayed or cancelled due to an overbooked schedule. Patients who are cancelled are often waiting in One-Day Stay holding for the entire day and it was reported that patients are often cancelled more than once. In-house patients who are cancelled occupy beds on inpatient units "waiting" for surgery. During the observation period, there was often a reference to having flexibility of scheduling an in-house patient. It is assumed that these patients could be contributing to a higher average length of stay ("ALOS").

Often, cases are not scheduled for the actual Attending Physician who will be supervising on the scheduled day and/or the order in which cases are scheduled is not correct. Making changes to either of these factors after the schedule is finalized will greatly impact Day of Surgery logistics, specifically the preparation and assembly of supplies/equipment in accordance with physician-specific items from the preference card and the advance set-up of the OR to ensure on-time start. When the case order changes for any reason, delays due to the necessary re-establishment of case set-up and room preparation are experienced.

During the assessment period, there were at least two incidents of a "surgery not indicated" finding on the part of the Attending Physician on the Day of Surgery, which did not appear to be a result of a change in patient health status. This finding supports the conclusion that all services may not follow standardized procedures for communication among Attending Physicians and Residents on OR schedules for their service.

While there is recognition that the surgical schedule is impacted by both the teaching environment and trauma service program, there is still an opportunity to

develop protocols to further standardize scheduling of cases which could improve throughput and operating efficiency.

Pre-surgical/Admission Testing/Elective Admission Clinic

Completion of comprehensive pre-surgical testing often reduces the need for cancellation and/or delays on Day of Surgery by ensuring that the patient is medically optimized for the surgical procedure, and all known medical conditions, labs, and other required diagnostics are performed before surgery.

The Hospital endeavors to perform pre-surgical testing on all patients who are referred through the clinics. The Hospital-based EAC is productive but limited given the physical space constraints. EAC is co-located with One-Day Stay. The EAC was recently expanded through the addition of a satellite clinic located at the former Lord & Taylor ("L&T") department store which is staffed by three RN's and support staff. Pre-anesthesia evaluation of each patient is conducted by a CRNA who staffs the EAC at both locations.

Pre-testing as part of the surgical clearance process has been greatly improved through this expanded capacity. Clinic patients seen at L&T can often be accommodated on the same day as their surgical consult and/or can schedule an appointment to return within one week prior to Day of Surgery. They no longer need to travel to the Hospital to be accommodated.

Additionally, Louisiana State Department of Correction ("DOC") patients can be accommodated at this location, as there is a locked unit onsite at the L&T facility. Most often DOC patients can complete pre-surgical testing at the EAC during the pre-surgical consult visit. The ability to complete the pre-surgical testing on this population will greatly reduce Day of Surgery delays/cancellations, as these patients historically had to be cleared Day of Surgery. It is assumed that this change in procedure will result in savings for the State DOC.

For the six-month time period (April to September 2008) preceding the opening of the satellite clinic, the former University Hospital EAC saw an average of seventeen patients per day. Total patients seen in both sites from October 2008 through January 2009 averaged 26 patients per day even with decreased volume due to holidays in November and December.

The OR Committee recently issued guidelines with regard to pre-surgical evaluation of in-house patients requiring 24 hour advance posting so that Anesthesia has ample opportunity to complete their assessment of the patient on the unit. While this protocol may contribute to reduced delays and/or cancellations by ensuring the patient is medically optimized before surgery, there should be an awareness of any increasing the pre-surgical length of stay. It is assumed that Anesthesia is effectively managing.

It will be important to continue to expand EAC capacity to keep pace with increased surgical volume.

Day of Surgery Logistics

The ability to operate efficiently and expedite throughput in the OR is dependent upon multiple factors including, but not limited to:

- ▲ Accuracy of preference cards, providing a road map of equipment, supplies, instruments and room set –up based upon physician preference;
- ▲ Actual availability of materials and equipment required for a case; and
- ▲ Turnaround time and responsiveness of Central Sterile Processing and Environmental Services.

Anesthesia and Nursing are both key resources and drivers in effective management of Day of Surgery.

Preference Cards

Updated and accurate preference cards are essential to providing appropriate supplies, equipment, and instrumentation in the room for a particular procedure and physician.

Preference cards are updated routinely. There are good internal controls on both creation and maintenance of preference cards to ensure accuracy and avoid duplication of cards for similar procedures.

This level of control requires at least one dedicated FTE and additional time of other management personnel, but seems to be a good return on investment of the dedicated FTE.

Materials Management

There is a system-wide standard operating procedure for procurement of supplies. Although it is somewhat manual and time-consuming, the process works and is assumed to control supply cost.

Two administrative/clerical staff are dedicated to processing and tracking purchase orders and special items – implants, grafts, etc. One of these individuals maintains detailed charging/billing information for implants and other items on consignment from vendors. The Service Coordinators (RN Supervisors, by title) assist in facilitating procurement of special items thereby ensuring that materials are available for scheduled cases within their service areas. This is particularly important in cardiovascular, ophthalmology, neurosurgery and orthopedics where there is a high volume of implants, grafts and other high cost items.

Implantables are purchased on a contract basis. A multi-step process is in place to obtain approval from a Clinical Standardization Committee at the system level to procure outside the contract for a new item required to meet a physician's preferred standard of care. The OR Director spends an inordinate amount of time working through "the system" and trying to facilitate communication between the Standardization Committee representatives at the system-level and the physicians. The physicians appear to be often frustrated with the process or requirements on their part to provide specific information for each of the exceptions.

The threshold for purchases without additional approval is $1,000, an amount that seems low in an environment that generally has much higher average supply expense.

The procurement system is not "just in time inventory" and inasmuch, the OR has gradually increased the inventory levels so that it can function and to ensure cases are not cancelled due to lack of supplies on hand. The current level of inventory is approximately $850,000 and was averaging about $600,000 prior to the closure of Charity Hospital.

Case Cart Set-up

Full case cart system is not utilized due to lack of available space to stage full case carts for every case of the day. A different process and staffing model is employed at the Hospital. Supplies and instrumentation are assembled by two administrative staff members who reside in the core OR storage area. These individuals have been hired post-Katrina and do not have clinical experience. There has been an extensive effort to train these individuals. An opportunity exists to further assist these individuals in job aides through the identification and location of supplies and instruments through a bar-coding system that is currently being implemented on instrument sets in Central Sterile. Through this system, location of supplies and instruments will be cataloged in an electronic system for easy reference.

Carts are assembled for first cases the day before Day of Surgery. Subsequent cases are then assembled throughout Day of Surgery. This system would appear to have potential to cause delays if the staff cannot meet the demand for same day preparation, but Management states this is not a significant impediment to turnover time. The "just in time" approach to case cart set up is said to be the result of a high case cancellation rate and frequent change in cases on the schedule which creates rework if the case carts are already assembled for the cancelled cases.

Further analysis of this process should be pursued in order to evaluate the efficiency of this process and whether or not there are significant delays due to supplies and instruments not being ready for a case to start.

Central Sterile & Instrumentation Availability

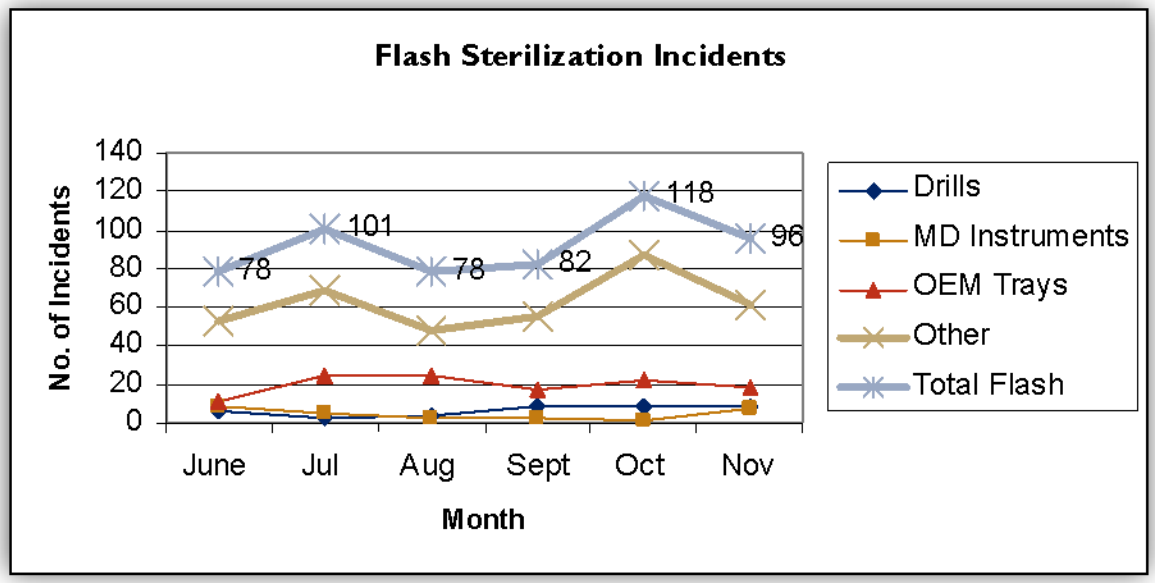
Central Sterile Processing ("CSP") appears to be well organized, managed, and has standardized operating procedures in place. This area has been completely refurbished since re-opening the Hospital and has state-of-art equipment and implementation is currently underway on a bar-coded instrument-tracking system. The CSP Manager has created an Excel-based instrument inventory system which is primarily used to maintain service, repair, and replacement records which facilitates knowledge of availability and condition of equipment. This will eventually be replaced by the instrument tracking system.

The issues in CSP are reported to be with staff training and compliance. Many of the post-Katrina hires come with no prior experience and have required extensive and ongoing training. The Manager has been able to have the position increased to higher grade which has helped in gradually hiring higher level and higher paid workforce.

Mistakes made by this staff are costly – scopes and instruments have been damaged due to lack of following manufacturer instructions and OR cases are delayed when careless errors are made in re-assembly of instrument trays. Incomplete sets returned to the OR results in a high level of physician dissatisfaction and frustration for the OR Nurse team. There was no specific supporting documentation or data available to validate the impact on on-time starts.

The OR Management is addressing staff compliance and performance with progressive disciplinary actions.

Flash Sterilization records are maintained on a monthly basis and root-cause analysis is performed based upon number of incidents.



Flashing-incidents average 100 per month with 70 percent due to dropped instruments, not enough instruments, and/or not enough instruments in set up. Types of incidents are categorized into original equipment manufacturer trays ("OEM") (vendor trays), drills and doctor-preference instruments. As Orthopedic and ENT case volumes increase, availability of drills will continue to require flash sterilization until such time that additional drills can be purchased.

One-Day Stay

All 23 hour stay, Ambulatory Medicine ("AM") admits, Outpatient Surgical, and Interventional Radiology and Cardiac Cath-Lab patients are processed through this point of entry to procedures. All patients are given the same arrival time regardless of their scheduled procedure time due to the overbooking/high surgical case cancellation rate.

Patients are often waiting all day – sometimes in an inadequately-sized waiting area – as there are not enough beds/bays on the unit. The unit is former inpatient unit configured with single/double rooms accommodating nineteen beds. There may be space for more beds if this were a typical curtained bay configuration. Patients are sometimes late to the OR and cause delays because there is limited capacity in the ODS unit. OR delays due to One-Day Stay appear to be due to space constraints rather than available nursing staff to prepare patients.

Managing the Day

A critical role in "managing the day" is an individual or RN and Anesthesia team who act as "Care Traffic Controller(s)". This team expedites throughput by

managing communication with key stakeholders including Attending Physicians and Residents, nursing staff from OR, PACU, Pre-Op Holding, anesthesia providers and the House Supervisor/Bed Control. They address issues with room availability, conflicts with equipment and instruments and assist in juggling of emergent cases into the schedule.

This model operates quite well at the Hospital and the nursing and CRNA personnel dedicated to this function are experienced and appear adept at managing all of the inherent issues of a trauma service and teaching environment. They play an active role in expediting throughput and maintaining order in a chaotic environment. However, there appears to be opportunity to further standardize processes and communication and further the many variables to improve throughput and minimize down time in between cases.

Additional cases are often added to the schedule prior to closing; by definition, they are add-on cases because they cannot be accommodated in a specific block time or room. There are also cases that are added onto the schedule on Day of Surgery, and these can be defined as emergent, urgent or true add-on electives of a non-urgent/emergent nature. Every effort should be made to schedule non-urgent/emergent cases into block time during subsequent days.

The Attending Physician of the Department of Surgery on call for Trauma Service is responsible for triaging emergent and urgent cases necessitating immediate use of an OR which results in bumping of scheduled cases. This requires attention and knowledge of cases in process, cases on the board and cases in the queue as well as a non-biased approach to adjudicating emergent/urgent and non-urgent in order to deploy resources. The effectiveness and results of this process seem to be a function of the individual rather than the process. It is reported that there is no consistent approach for triaging, and that often times General Surgery service is given priority over other cases and cases of a non-urgent/emergent. No data was received to evidence this, but observations would support this conclusion.

During the five-day sample period the schedule was analyzed, there appeared to be instances of non-urgent/emergent cases added to the OR Schedule in an environment that was already on an “overbooked” status for the day. For example, abdominal washouts are routinely booked as “add-on” when the requirement for such a procedure is generally known on the service’s inpatient caseload and at times may be factored into the prioritization of elective case time scheduling into block time.

Organization Structure and Staffing

OR Committee

The OR Committee structure and charter seem typical, and has key stakeholder membership which includes: Surgical Department Chairs/Chief, OR

Management, Anesthesiology and a quality improvement/performance improvement ("QI/PI") representative. There seems to be consensus from the perspectives of the Chair of the Committee, Chair of Surgery, Associate Nursing Administrator of the OR and the Director of Anesthesia that this is a functional committee that addresses issues and has good participation from core group members.

Under current leadership, the Committee has made progress in the implementation of policy and procedure initiatives in the interest of improving operational efficiency and throughput. These initiatives are assumed to have an impact on quality and service provided to the patients. Such policies include: improved pre-surgical posting guidelines, enforcement of pre-op testing guidelines and completion of standard requirements such as consents, H&P and orders.

The current Chair of the Committee seems to fairly represent the interest of all stakeholders and supports the OR Management Team while facilitating necessary communication.

Anesthesia

Anesthesia is staffed with a CRNA model with oversight from the LSU School of Medicine Department of Anesthesiology. The role of the Chair of Anesthesiology and the Attending Physicians appears to be one of straightforward oversight and supervision. They are not involved in managing any daily activity and are reported to not be "vested" in the process.

Across the country, Anesthesia services are often the limiting factor in expanding capacity in OR due to the inability to recruit Anesthesiologists/CRNAs. Sometimes provider groups have a shift-coverage mentality which often results in a desire to bring rooms to a close promptly at the end of prime time. There can be an unwillingness to grow case volume through end of day add-on activity. In the model where private practices are compensated through billing professional fees, they also require a stipend for providing management services and/or require some offset for providing uncompensated care when the payer mix is such.

While the CRNA model may be a fixed cost model for the Hospital, it does appear to provide reliable and adequate staffing levels to handle the scheduled and add-on case load as required without limitations. Moreover, there is a willingness on the part of the current Director of Anesthesia and team to provide a flexible staffing approach.

According to the Director, there is a meticulous charge capture model so that the Hospital is billing and collecting for all billable Anesthesia events and chargeable expenses. He estimates the value to be almost $2 million during a recent 24 month period.

Staffing levels are in line with the requirements for coverage schedule for all Anesthesia positions within the Hospital. A review of Human Resources Position Control and recent utilization of per diem personnel indicate a staffing level for CRNA at about 42 FTEs. The current staffing matrix (rooms, shifts, and positions required to be covered) below indicates a daily coverage factor for breaks and an annual coverage factor of fifteen percent for Paid Time Off (sick, vacation, holiday) is 41.2 FTEs – assuming there is management time factored into utilization.

CRNA Staffing Matrix

Area	Shift	Positions	Hours	Total Hours	Days /Week	Total Wk Hours
OR	Days	10	8	80	5	400
OR	Evenings	5	4	20	5	100
OR	Nights	3	12	36	5	180
OR	Wkends	3	24	72	2	144
Trauma	24/7	1	24	24	7	168
OR Board	Days/Eves	1	8	8	5	40
Pre-Op	Days	1	8	8	5	40
Specials, Rad, Endo	Days	1	8	8	5	40
L&D	24/7	1	24	24	7	168
EAC	Days	2	8	16	5	80
						1360

1360 Total Staffed Hrs/Wk

34 FTEs

2.1 Break Coverage Factor

5.1 PTO Coverage Factor

41 Total FTEs Required

Further review of the staffing model is required to estimate the impact of the return of an Anesthesia Residency Program. It is assumed that these will provide coverage currently being covered by some CRNAs, so staffing levels may need to be adjusted.

Operating Room ("OR"), Pre-Anesthesia Care Unit ("PACU"), and One-Day Stay ("ODS") and Elective Admissions Clinic ("EAC")

Upon initial review of Nursing's organization charts, it appears that there are multiple layers of supervisory and management personnel as well as administrative/clerical support personnel. However, it is important to understand that the actual roles and responsibilities of individuals are not always properly reflected by title. This is particularly the case with the OR staffing roster.

OR

RN Supervisors are dedicated to a specific function in this organization structure. One is dedicated to Informatics and Information System Support/Charge Capture Reconciliation. Two are dedicated to running the day as Board Control on day and evening shifts (which has been previously acknowledged as a vital role). The other supervisors function as Service Coordinators providing oversight for particular services to ensure appropriate resources are ordered and available,

room set-up and room turnover are timely, generally expediting issues and managing physician expectations for their assigned services.

The OR is staffed with an RN/Scrub Tech model per room and assumes some procedures require a third staff member. According to Association of Operating Room Nurses ("AORN") Standards, the general calculation for staffing an OR room is:

2.5 FTEs	**+**	**Indirect Care Staff**	**+**	**Benefit Time Factor**	**+**	**Call Factor**

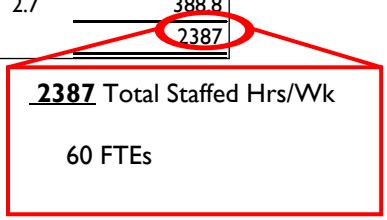
In this equation, **Indirect Care Staff** includes Surgical Services Director, Peri-Operative Educator, Charge RN, Schedulers, Secretaries, Nursing Aides, Environmental Services techs and other clerical personnel. **Benefit Time Factor** includes non-productive time.

The ratio of Indirect to Direct Care Givers is usually one-to-two. According to the Human Resources Position Control schedules provided, there is a total of 108.4 FTE positions (without Agency, Travelers, Per Diem) of which 81 are Direct Care Givers and 27.4 are Indirect to Direct Caregivers - a ratio of one-to-three.

The staffing matrix below provides for 2.7 FTEs per room (rather than 2.5 recommended by AORN), but includes the Manager and RN Supervisors and coverage factor for breaks. This seems to be a reasonable approach, provided the break factor is not included in the PTO factor described below.

OR Nursing Matrix

Hours	Shift	Rooms	Hours	Days /Week	Total Hours	Staff Per Room	Total Staffed Hours Per Room
7:00 a.m. - 3:00 p.m.	Days	11	8	5	440	2.7	1188
3:00 p.m. - 7:00 p.m.	Evenings	6	4	5	120	2.7	324
7:00 p.m. - 7:00 a.m.	Nights	3	12	5	180	2.7	486
7:00 a.m. - 7:00 a.m.	Wkends	3	24	2	144	2.7	388.8
							2387



The OR Director uses a PTO coverage factor of 570 hours (fourteen weeks) or 27 percent of paid time and therefore there is a difference seven FTEs required in this staffing matrix. This discrepancy in PTO factor and staffing requirements is due to the inclusion of break factors in the PTO calculation. This would appear to be overstating staffing requirements.

PACU

The Recovery Room Staff provides coverage for both the Pre-Anesthesia Care Unit ("PACU") and the Pre-Op Holding area where all patients, other than those who are transported directly to an OR from a Critical Care Unit, are prepared for surgical procedures. On this unit, IVs are started and Anesthesia conducts a pre-Anesthesia evaluation (the first is conducted during the pre-surgical testing exam).

The PACU is staffed with a one-to-two nurse-to-patient ratio for both the Phase I and Phase II recovery periods in accordance with American Society of Peri-Anesthesia Nurses ("ASPAN") standards. There is a Manager, two RN Supervisors and an additional vacant supervisory position. The Manager is currently responsible for oversight of the Cardiac-Cath Lab as well. All three management personnel are currently working the day shift. There is an opportunity to better deploy these resources.

ODS and EAC

Staff provides direct patient care for patients who are admitted and discharged through the One Day Stay ("ODS") unit as well as the Elective Admissions Clinic ("EAC") at both the University Hospital and L&T locations. They prepare and discharge patients for ambulatory surgery, Interventional Radiology, and Cardiac-Cath procedures as well as provide pre-surgical testing on Day of Surgery for those who have not been previously cleared. Total patient encounters for these activities average 60 per day. The combined EAC locations have an average of 26 patient encounters per day, but there is also a considerable number of nursing hours required to preparing and reviewing patient charts for the pre-surgical/pre-admission clearance process.

A staffing matrix was not provided and additional information is necessary to compare required versus currently staffed and hours of patient care per FTE.

Administrative/Clerical Personnel – OR, PACU and ODS

Administrative and clerical personnel are all organized under the supervision of an Administrative Manager and are deployed to a wide variety of functions including Scheduling (Posting) Surgical Cases, Unit Clerk type functions, Materials Management & Procurement/Purchasing, and Charge Entry functions.

There may be some opportunity to reduce total administrative FTEs and a more in-depth analysis of processes, enabling technologies and skill/shift mix to determine staffing requirements and more precise estimate of reduction opportunities should be conducted.

Additional Personnel

Environmental Services provides three FTEs dedicated to the OR for turnover cleaning and terminal cleaning. They appear largely unsupervised and do not perceive themselves accountable to the OR Management team. There appears to be an opportunity to improve productivity through increased oversight.

Throughput Analysis & Key Performance Metrics

Throughput Analysis

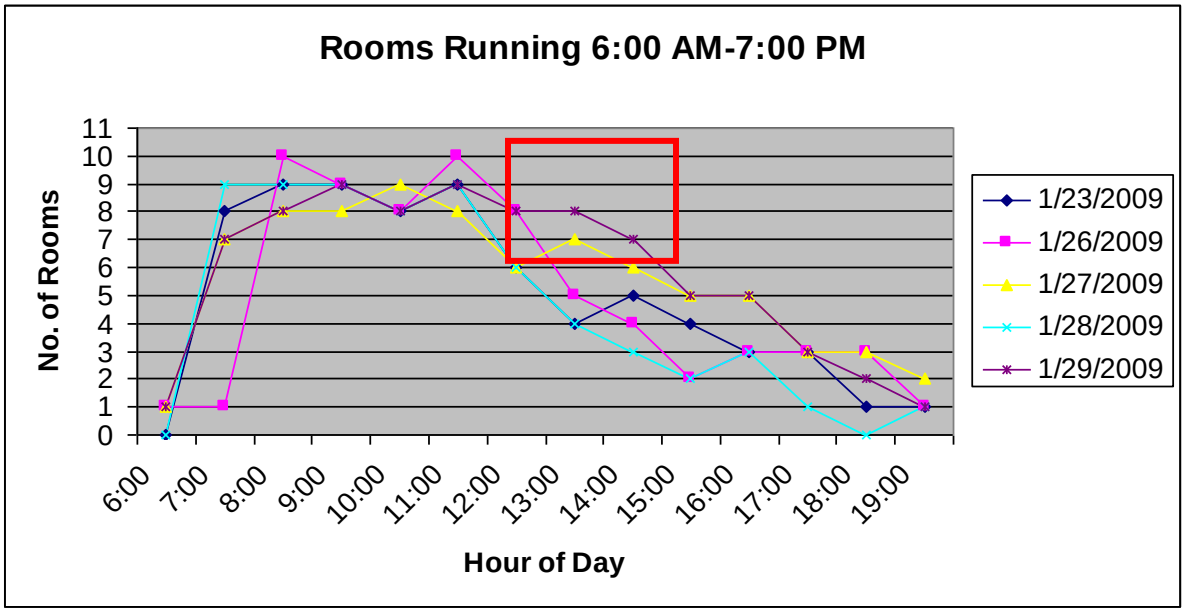
In addition to reviewing existing reports, select data from the Hospital and other manual recordkeeping were requested to complete a comprehensive analysis of actual and real-time measurement of throughput.

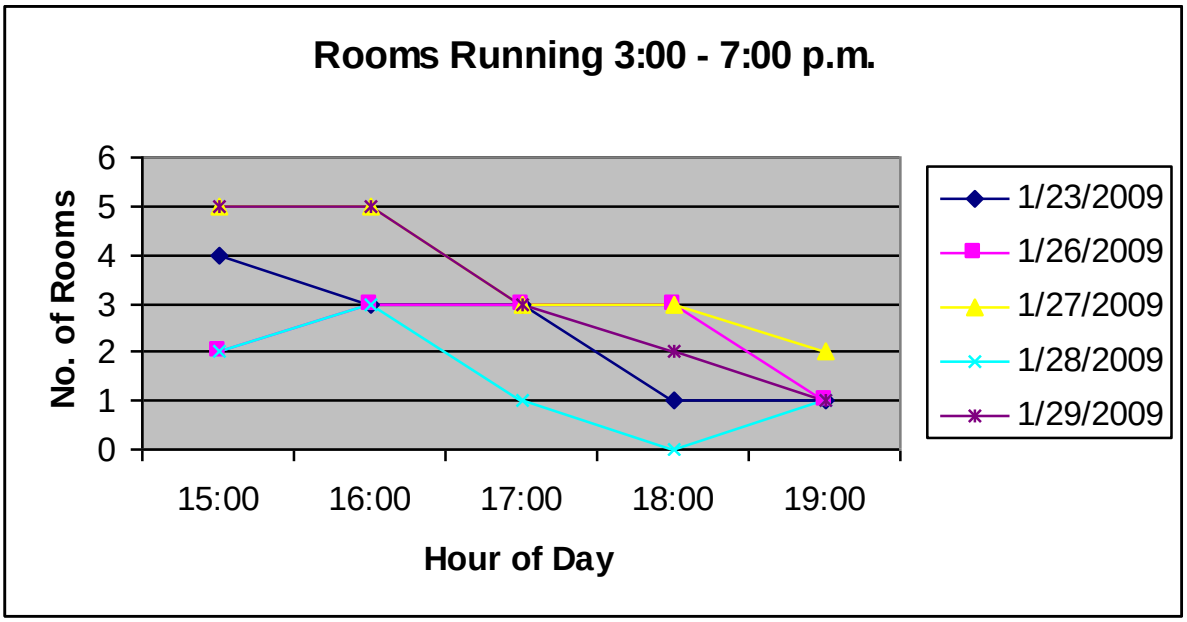
Rooms Running

Below is a graphic display of the number of rooms that were running by hour of the day (7:00 a.m. to 7:00 p.m.) for a sample five day period – January 23, 26, 27, 28, and 29. The analysis of rooms running indicates that there are rooms that are "closed", defined by no follow-on cases, well before 3:00 p.m. This indicates a significant under-utilization of prime time. While this is a small sample, it is probably a typical flow for a multitude of reasons and that any other sample period would most likely demonstrate the same patterns of activity.

NOTE: First Graph: The area encircled by the red box indicates the drop in rooms running after 12:00 noon on these five days. On three of the five days, there were six or less rooms running after noon.

Second Graph: During the five-day period, there was an average of 2.6 rooms running between 3:00 and 7:00 p.m. However, when each day was reviewed separately, there were 0, 1, or 2 rooms running at 6:00 p.m. on three days.





Sample Schedule v. Actual

Below are some key statistics derived from comparing the scheduled cases to actual OR room utilization which were collected and analyzed for a five-day period in order to perform a deeper analysis of throughput.

	Rooms Blocked	Rooms Scheduled	Rooms Utilized	Cases Scheduled	Cancelled Cases	DOS Add-ons (AO)	Total Cases Completed	Cases w/in Prime Time (PT)	AO in Prime Time	Rooms Ending before 3:00	Rooms Run 3:00pm-7:00pm	Avg. TAT Mins
Friday 1/23	9+TR	9	9	20	3	13	30	21	6	5	5	80
Monday 1/26	9+TR	10	10	20 +4 ADD	5	7	26	21	3	6	4	54
Tuesday 1/27	9+TR	9	9	21 +8 ADD	5	6	30	21	3	4	5	62
Wednesday 1/28	9+TR	9	10	22 +1 ADD	2	5	26	22	4	7	2	39
Thursday 1/29	9+TR	9	9	18 +3 ADD	2	7	26	22		2	6	

TAT=Turnaround Time

	Utilization			
	w/o TAT 9 Rooms	**w/TAT 9 Rooms**	**w/o TAT 10 Rooms**	**w/TAT 10 Rooms**
Friday 1/23	68%	84%		
Monday 1/26			65%	86%
Tuesday 1/27	65%	81%		
Wednesday 1/28			54%	66%
Thursday 1/29	67%	85%		

Observations of actual activity during this period highlight six main points:

1. The average number of cases scheduled is 20 per day, but there can be as many as 30 “scheduled” when the “add-on room” schedule is factored into the total case load.

2. Cases scheduled into the “add-on” room after the schedule is finalized are by definition not “emergent”, some may be “urgent”, but others were simply “overbooked”.

3. The number of cases performed during prime time was consistently 21-to-22 and utilization (without turnover) was only in the mid to high 60 range when utilizing nine rooms.

4. On three days, more than 50 of the rooms running ended well before 3:00 p.m. On three days, five or more rooms were running after 3:00 p.m.

5. The average turnaround time ranged from 39 minutes to 80 minutes and was impacted by a wide range of factors including but not limited to: patient required X-ray, instrument needed flashing, change in patient status, waiting for supplies, room not ready, transport from critical care unit and awaiting Surgeon.

6. The most frequent delays resulted from decisions with regard to triaging, preparing for add-on cases, and lack of beds available to prep patients in ODS/EAC. On one particular day, delays in the OR were caused by a need for critical care beds.

From these observations, four conclusions stand out:

1. The detailed analysis of the sample period validate other analyses which indicate that capacity is available during prime time – provided gridlock can be mitigated through a number of improvements in policy & procedure, process, operational efficiency and adherence to policy & procedure.

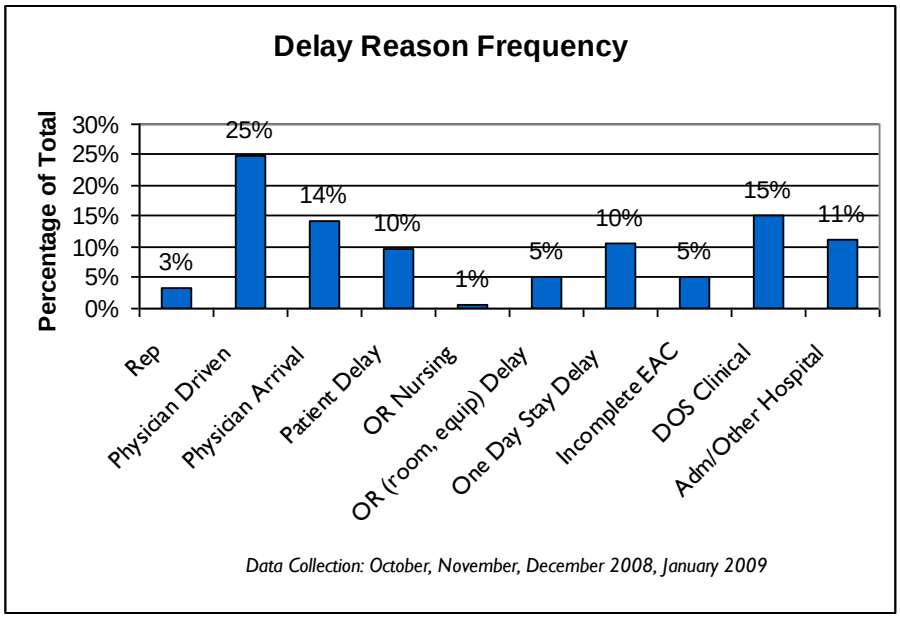
2. Improved process around scheduling is required.

3. Policy for add-on cases and triaging of add-on cases needs further enforcement.

4. Delays even for good and valid reasons are impacting OR throughput and need to be a focus of improvement.

Delay Analysis

The data below is collected from narrative reports provided by the Director of Anesthesia to the OR Committee on a monthly basis. The purpose of this report is to examine specific incidents of delays and determine the root cause. There were a multitude of reasons that could be organized into ten categories. Below represents 153 instances of data collected during four months.



25 Percent Physician-driven

The most frequent reason for delay was driven by the physician including H&P not complete, site not marked, missing Orders & Consent, medical/cardiology optimization required, and order of cases changed at Service/Surgeon's request.

15 Percent Change in Clinical Status

The Day of Surgery change in clinical condition incidents raises the question of whether complete pre-surgical clearance work up was done.

A higher percentage of delays due to incomplete EAC would have been expected given the lack of adherence to pre-surgical testing protocols, but it was assumed that these are not "counted" as delays because the process is accommodating Day of Surgery pre-surgical testing into the schedule and allotted time for clearing patients Day of Surgery.

Lack of bed capacity within ODS is 10 percent of delays in this sample, but reported to be a more frequent occurrence. In sample two month periods, twenty patients were cancelled after being prepped by ODS due to "no OR available". In many cases, these patients waited in ODS for the entire day. Patient satisfaction has to be impacted by frequency of cancellation and amount of time spent on ODS.

There is a need to examine whether overbooking contributes to preparing patients who are ultimately cancelled and impacting throughput on this unit.

The conclusion of this analysis is that there is a process in place for consistent and accurate delay code capture in order to identify the current and constant drivers of delays and engagement around key stakeholders to address.

Cancellations

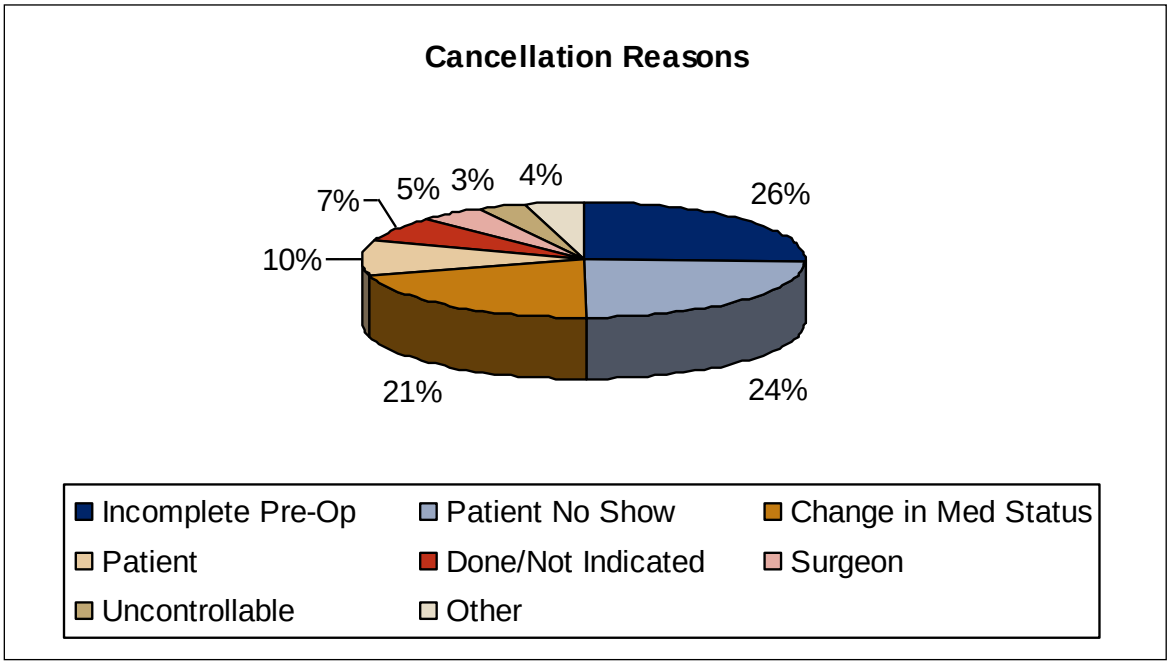
The cancellation data below, captured in the OR IT system, was analyzed from a standard report from the OR system for the period July 2007 to January 2009. The categories below were combined from a list of more than twenty reasons. Below represents an average of 74 cancellations per month for the period July 2007 to January 2009. There is a belief on part of the OR Management Team that cases are often coded more than once for cancellation reason by different personnel at different phases of case documentation, *e.g.*, Posting and Intra-Op Charting.

26 Percent due to Incomplete Pre-Op

Cancellations due to incomplete pre-surgical testing should be greatly reduced in the future due to both the scheduling protocol that requires pre-surgical testing prior to the confirmation of booking and through the expanded capacity and availability of the satellite EAC that recently opened.

24 Percent Patient No Show

Increased education at pre-surgical testing may improve the no show rate.



Data Capture, Reporting & Metrics

Monitoring and measuring performance and productivity is dependent upon standardized and consistent data capture to produce credible and reliable metrics. Regular and frequent measurement of key performance metrics enables immediate root cause analysis and necessary interventions.

Data is collected manually and electronically in many areas of the Peri-Operative Services Department. Some data is routinely collected and perceived to be required for compliance and/or regulatory reporting. It appears there may be some duplication of data collection and/or reporting for different purposes and audiences. There were enough instances observed to support conclusion of opportunity for elimination of some redundancies through further analysis of these various data collection points and processes. As an example, PACU minutes are captured manually and electronically for different purposes and may or may not be accurate. A supervisor dedicates a significant percentage of working hours to this function.

Data related to many aspects of the operative record is captured in the electronic Peri-Operative chart by the Circulating RN for each surgical case. The Informatics RN Supervisor spends a significant percentage of working hours auditing chart entry of minutes and other key statistics that are essential to the charging and billing systems and to reporting key performance metrics. While an audit function of Peri-Operative charting is a sound process and necessary, in this case the audit function is more of a work-around to correct an expected level of data entry errors before records are prepared for charging and billing purposes. The need for this intervention appears excessive. There should be a feedback loop to ensure that sub-optimal data completion rates and accuracy rates are communicated to the responsible individual and education is provided to reduce errors.

In addition to the error/incomplete data instances witnessed during onsite observation of this process, there is further reason to question the credibility of the data. For example, the number of cancellations reported by reason were excessive compared to other manual systems (and anecdotal evidence) collecting total cancellations. It was determined that there are entry points to the record where more than one individual in the process may “tag” the cancellation for a different reason resulting in multiple “cancellation” instances of the same case. The focus seems to be on data collection rather than data integrity. This is most likely only one of the examples of how/where data capture needs to be improved.

All data collection activities should be revisited for intent and current purpose and all collection efforts eliminated that are not utilized for specific compliance and regulatory compliance and/or used for the purpose of managing performance.

A management tool in the form of a daily or weekly dashboard should be created to assist the OR Management Team in making well-informed, real-time decisions to improve performance and throughput of the OR.

RECOMMENDATIONS

Operating Room

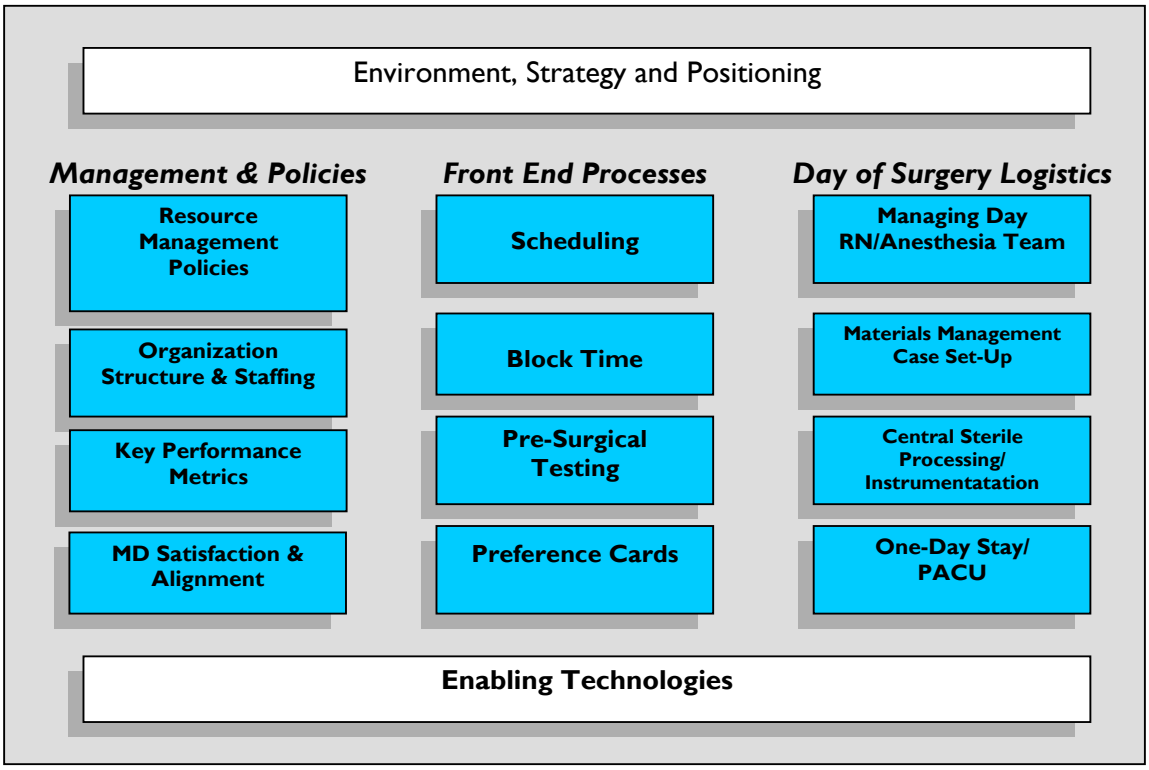
The OR can be characterized as an operationally complex and politically sensitive microcosm of the hospital at large. Its operational effectiveness is influenced by a wide variety of factors within the OR and outside of the OR. There are a myriad of reasons *why* an OR would potentially fall short of its optimal performance, and therefore a wide variety of potential options regarding *how* ultimate improvement can best be achieved.

It is in the Hospital's best interest to develop a comprehensive, yet focused plan. Any performance improvement plan will require time and attention of its personnel, as well as its scarce financial and political capital, and should be focused on the things that really matter. The "things that really matter" are those initiatives that have easy to implement solutions and can produce rapid results, as well as those longer-term culture and policy changes that will require more effort to engage key stakeholders, but those that will result in sustainable change and durable results.

The objectives of this focused performance improvement plan are:

1. Create OR Capacity
2. Reduce Cost Structure

The objectives can only be accomplished through identification of key drivers of operating efficiencies, development of policy and procedure and improved process workflow, organization structure and alternative staffing models/approaches and full deployment of available supporting/enabling technologies.



Capacity & Resource Management

The Hospital should establish resource management policies and goals with regard to utilization for its OR capacity, aiming for an overall utilization target of 75 percent without turnover.

Utilization goals should be established for the ten operating rooms with consideration of an overall target of 75 percent without turnover. Utilization goals should be established by the OR Committee with consideration of block time, average case time per service, and service mix.

Given the constraints of the footprint of the physical facility, capacity cannot be expanded horizontally to provide more OR hours during prime time. Improved throughput during prime time and expanded late afternoon/early evening staffed hours of operation could provide potential capacity for additional 2,500 to 3,000 cases. These are high level estimates and should be regarded as such. Actual capacity may vary depending upon the impact and volume of emergency/trauma cases which may eventually need more than one dedicated available room.

The Hospital should create additional capacity by more effectively utilizing its ORs during prime time, and thereby increasing case volume.

Additional capacity can be created through more effective utilization of the ten operating rooms during prime time. The analysis of both prime time utilization

and rooms running (albeit a small sample period) indicate additional capacity if optimal throughput can be recognized.

The data analysis indicates an average of 55 percent prime time utilization (based upon 10 rooms). This utilization percentage may be somewhat overstated as emergencies and cysto cases may have been factored into this utilization.

Assuming ten rooms can be consistently operated at 75 percent utilization (without turnover time), an additional 960 minutes of surgical time could be available per day. At an average of 150 minutes per case, up to six additional cases per day should be expected. This projection assumes trauma emergent cases and cystology cases are not factored into the ten rooms, but into Rooms 11 and 12.

A separate analysis of Rooms Running (for a sample period of time), confirms the under-utilized room capacity. During this sample period, an average of 756 minutes per day – based upon ten rooms – was identified as under-utilized. The same calculation of average case of 150 minutes would suggest an average of capacity for five additional cases per day.

The annualized impact of potential increase of five to six cases per day is estimated to be 1,250 to 1,500 cases. The actual number could be higher based upon service mix as shorter minutes per case average for procedures vary by service. The actual impact will be dependent upon the ability to make dramatic and sustained improvements in all of the scheduling and pre and day-of operating logistics that have been identified and the ability to recruit and train appropriate levels of nursing staff.

The Hospital should create additional capacity by scheduling cases in the late afternoon or early evening.

The OR Management Team is currently working toward staffing five rooms (plus one room dedicated to Trauma) from 3:00 to 7:00 p.m. In reviewing a sample period of actual rooms running during the 3:00 p.m. to 7:00 p.m. time frame, it is estimated that an additional two to three cases per day are possible if these rooms are consistently staffed until 7:00 p.m. The annualized impact of this additional staffed capacity is another 500 to 750 cases. Obviously, if all ten rooms are running late afternoon and early evening, capacity would increase even further expanding to availability of another five to seven cases per day with an annualized impact of 1,250 to 1,500 additional cases.

A fundamentally different staffing model and shift mix would need to be crafted to determine the most economical staffing matrix. It will require significant additional nursing and Anesthesia personnel. It is assumed that some indirect care functions may need to be increased – support personnel in environmental services to ensure timely room turnover and materials management to keep pace

with case cart assembly requirements. It should not impact supervisory levels of required personnel.

The Hospital should create OR capacity by changing the location of certain procedures to the bedside on the unit.

The Chair of Surgery and others suggest there are a number of procedures that are currently scheduled or added onto the schedule utilizing OR space that might be safely done at the bedside, where such standard of care is acceptable.

Analysis of case volume bears out opportunity to create additional capacity by moving place of care to the bedside for procedures such as abdominal washouts, tracheotomy, and bronchoscopy procedures. Based upon seven months of procedures, there is potential to relocate up to 49 cases per month with an average case time of 55 minutes to bedside care. Not all of the cases are likely to be deemed best standard of care to be performed on the critical care units.

OR Procedures- July 1, 2008 - January 31, 2009				
Cases: Potential Bedside Care	**Cases**	**Minutes**	**Avg./Case Mins**	**Cases/ Month**
Bronchoscopy Flexible	13	577	44	1.9
EGD Assisted Peg Tube Placement	40	2380	60	5.7
Esophagoscopy	3	222	74	0.4
Incision & Drainage	71	3083	43	10.1
Insertion of Chest Tube	10	820	82	1.4
Tracheotomy	27	3152	117	3.9
Wound Debridement	14	292	21	2.0
Abdominal Washout	168	8672	52	24.0
Total	**346**	**19,198**		**49**

A comprehensive plan needs to be developed including identification by key stakeholders (Critical Care Chief, Trauma Surgeons, Nursing Admin, Anesthesia) of appropriate procedure types, as well as the equipment, supplies and staffing requirements and development of policy, protocol and procedure to implement this change in care delivery model.

The Hospital should consider developing a separate facility dedicated exclusively to outpatient surgery, provided the demand can be substantiated and payer mix is considered.

Review of ambulatory case volume and anecdotal evidence would indicate interest and demand for more elective cases, particularly in areas of orthopedics, ENT and general surgery.

The current payer mix for Ambulatory Surgery (outpatients) includes 77 percent whom have no payment source, identified as self-pay. The demand for elective ambulatory surgery time should be verified and a feasibility study conducted to

determine whether this additional capacity will be utilized by the faculty practice staff for private practice patients which might produce an improved payer mix or patients from clinics (from the former University Hospital and L&T based clinics) as well as outlying clinics will be shifted to an outpatient setting from the Hospital OR producing additional capacity by offloading the ambulatory surgical case.

Senior leadership has identified excess capacity available at a system-owned Ambulatory Surgery Center in Baton Rouge. Efforts should also be made to identify other local alternatives that could be developed into an outpatient surgery center. Potentially additional vacant facilities within the Hospital/Medical School campuses could be considered.

The Hospital should implement policies and reporting systems to increase effective utilization of block time.

Block time appears to be an effective way to reasonably allocate OR time in an environment where capacity is limited and two teaching programs are supported.

However, as higher percentage of schedule will be allocated block time by March 1, 2009 (almost 90 percent blocked), it will be even more important to ensure that block time is effectively utilized. Utilization goals should be defined and compliance to goals enforced by the OR Committee. Block Time Utilization reports should be presented at the OR Committee meetings and acted upon routinely to adjust block (increase/ decrease) as required.

The approach to block management must be collaborative, not punitive. The information technology system should be enhanced and/or some combination of manual interventions be developed to create reliable and credible block time reports.

The Hospital should conduct an in-depth and comprehensive review of staffing levels and labor productivity metrics to identify cost reducing opportunities.

A more comprehensive review of staffing levels and labor productivity metrics by department and function compared to benchmarks for other best-practices performing Academic Medical Centers on both a regional and national level should be conducted. The process must include a detailed review of essential job duties of each position along with the assessment of process workflows and enabling technologies to determine appropriate staffing levels tied to well-accepted labor productivity metrics – such as volume of OR cases, ambulatory encounters (EAC) per FTE, etc.

Within the scope and timing of this engagement and limited access to payroll and other data, opportunity for potential reduction of FTEs in supervisory and administrative/clerical functions have been identified, but requires further

assessment and validation. There may be an opportunity to reduce costs through different skill or shift mix in addition to FTE reduction as well.

The shift mix for OR Nursing staff should be examined for opportunities to improve split shift coverage to maximize throughput and utilization of prime time. A good percentage of the day shift arrives at 6:30 a.m. for a 7:30 a.m. case start, albeit cases seem to start earlier on some days, and assume that this shift ends at 3:00 p.m. This means the day shift would be driving toward a room end time of earlier than 3:00 p.m. without having a change of staff for a case in progress. A change in employee start time to 7:00 a.m. would result in shift end time of 3:30 p.m. which may provide continuity in room team coverage through 3:00 p.m. Arrival time of 30 minutes in advance of case start time is ample, provided others have done their part to ensure the OR is "ready to go" for first case start.

If case carts are prepared the prior evening and Service Coordinators are accountable for checking room set up for their services, the Circulating RN and Scrub Tech teams should have ample preparation time in arriving thirty minutes prior to case start time.

Anesthesia staffing should be reviewed for potential impact of Anesthesia Residency program.

Logistics Prior to Day of Surgery

In order to maximize throughput, policy and process changes are required in posting and managing the schedule and in pre-surgical testing.

The Hospital should develop and/or enforce compliance with scheduling protocols and training for Residents to improve OR scheduling.

The OB/GYN Service reports to have standardized operating procedure established for review of the OR schedule with Attending Physicians and Residents. The Chief Resident is charged with facilitating and communicating the schedule to all responsible parties so that the Attending is listed as Staff MD on each case and cases are scheduled in appropriate sequence.

A suggested approach would be the formation of an ad-hoc Committee of the OR Executive Committee to establish scheduling protocols for all services. The Committee Chair should appoint a faculty member/Chief Resident to spearhead this effort to establish and implement protocol and training around improved OR scheduling and communication.

The goal should be to produce a more tightly developed and realistic schedule that accounts for impact of newly diagnosed and/or urgent cases from clinic sessions and the impact of emergent cases based upon historical scheduling data. These issues will greatly reduce delays and chaos created by an overbooked and/or unrealistic schedule.

Recently established policy with regard to receipt of History & Physical, Consent and Orders in advance of confirmation of case posting should be more widely enforced. Cases should not be confirmed on the final schedule if these basics are not received by EAC by the deadline to finalize schedule.

Further, protocol should be developed to require cases to be scheduled to an average time or average number of cases. Average case time scheduling is a heuristic generally built into most scheduling information technology systems. Recognizing the variability in procedure time given the residency program, scheduling to average case time based upon the Attending Physician's average case time establishes a realistic scheduled case load and establishes procedure time goals.

These basic protocols can greatly contribute to operating efficiency through more reliable expectations for Day of Surgery even with emergencies and unexpected issues.

Add-on case triage should be a well-accepted and communicated protocol and should be consistently applied in accordance with the policy, not vary depending upon the individual in charge of interpreting and acting in accordance with the policy. Generally, the "vested" Anesthesiologist in charge is in the best role to adjudicate and make unbiased decisions with regard to bumping for urgent/emergent cases. In this situation, it does not seem possible that the Attending Anesthesiologists will assume this role. There are multiple other options for addressing who is designated in the role, but the protocol should be agreed upon within the structure of the OR Committee and applied consistently by all physicians who are charged with this responsibility.

The Hospital should develop a plan to determine those resources required to increase EAC volume.

The satellite EAC at L&T has created additional capacity, offloaded some volume from Hospital EAC and provided a more convenient and much needed resource for clinic patients at this location.

EAC capacity needs to be expanded or the process made more efficient in order to keep pace with increasing surgical volume.

A work plan should be developed to determine resources required to increase EAC volume. This could be accomplished through a capacity analysis that would require examining average encounter time for various surgical patient types – admitted, outpatient, Department of Correction – and developing a staffing/capacity matrix. Detailed process workflow analysis needs to be factored into staffing requirements to take into consideration any lack of technology and/or other support and tools that might streamline this process.

Day of Surgery Logistics

The Hospital should aim to create a system for assembly of case carts and preparation of ORs the evening prior to surgery.

It appears there is a need to develop education or orientation materials to familiarize new medical staff and Residents with the System's Procurement and Materials Management Policies and Procedures. New members of the medical staff are often frustrated by the process and view the OR Management team as an obstacle even in situations where those individuals are trying to expedite requests on behalf of the physician through the system. Improved education and communication may establish better expectations and therefore improve physician satisfaction (frustration) with regard to this particular issue.

As scheduling protocols are established and enforced and schedule predictability increases, the goal should be to assemble all case carts and prepare room set up the prior evening. This may require additional resources or the redeployment of existing resources such as night staff during down time.

The Hospital should develop a work plan to monitor the use and availability of instrumentation to ensure both service mix and volume are not impacted by the availability of instrumentation.

Real time reporting of instrumentation tray errors should be developed and results reported to the responsible individuals on a daily basis. Efforts should be accelerated to fully implement the instrument scanning system, if such will help to automate more of the process and/or improve accuracy.

Many OR information technology systems include a conflict checking resource which allows for notification of conflict of required equipment and/or instrumentation occurs in concurrent or subsequent cases – if such is tied to the inventory system. If this feature can be activated, needs to be further populated or an interface needs to be built to the instrument scanning technology, it should be considered.

A work plan should be developed to determine availability of instrumentation to meet future demand. This is accomplished through an analysis of instrumentation sets and other equipment in current inventory in combination with flash sterilization experience. Together, this information can create utilization projections for potential capital expense requirements to meet growing demand of particular services, as Neurosurgery, ENT and others increase both scheduled block time and assumed case volumes.

The Hospital should develop a work plan to conduct a comprehensive throughput review by hour-of-day to evaluate productivity, capacity, and identification of gridlock times with potential solutions.

Ability to process patients to meet demand and to prepare patients for first case start for the various patient areas is limited by the number of beds available on unit and is even hampered by waiting room space. OR management has requested allocation of adjacent space now utilized as conference room. Consideration should be given to the unit's physical space constraints and availability of space for redeployment within Hospital.

It is recommended that the Hospital revisit the effectiveness of the policy of same arrival time for all patients and the impact it has on patient satisfaction for those who are often waiting in cramped spaces or beds for a good part of the day and/or are ultimately cancelled after arriving at 5:00 a.m. or 6:00 a.m.

A work plan should be developed for a comprehensive throughput review by hour-of-day to evaluate productivity, capacity and identification of gridlock times with potential solutions. Consideration should be given to further preparing patients on this unit through Anesthesia interview and IV insertion on this unit rather than at next station of care in Pre-Op Holding.

The Hospital should develop standardized policies and processes with regard to higher levels of communication between the RN/CRNA Board Runner team and the intra-op staff to improve turnover and start times.

The RN/CRNA team should be recognized for their generally effective management of OR throughput. They effectively juggle the room and staffing resources to expedite and optimize utilization. There are opportunities to improve communication with Circulating RNs and Service Coordinators to more accurately manage and be "ready to go" with the next case through implementation of standardized procedures.

Circulating RNs should own responsibility for actively communicating with the Board Runner to provide advance notice of case closing/ending, case delays, and/or other anticipated room turnover. Further standardization of this communication could produce improved turnover and start times. Service Coordinators should act as troubleshooters in the core of the OR to anticipate issues and problems with next cases and expedite solutions.

Key drivers of delays need to be reviewed in a constant feedback loop with the Board Runners, Service Coordinators and OR Management team in order to determine patterns and implement solutions for recurring factors contributing to delays.

Throughput & Key Performance Metrics

No one solution will solely solve gridlock and improve throughput. Optimizing throughput is measured in minutes not hours, but those opportunities to improve in minutes occur all day long.

While multiple factors impacting pre and Day of Surgery logistics have been identified and some high level recommendations have been made, a more comprehensive plan for facilitating and expediting throughput needs to be developed based upon additional collection of real time information.

The Hospital should develop a work plan to improve the quality of data capture and the reporting/use of key metrics to manage performance and improve throughput.

A work plan should be developed for the improvement of both the quality of data capture and the reporting/use of key metrics to manage performance and improve throughput. Key performance metrics should be used for root cause analysis and development of solutions to patterns of problems that result in delays and down time in the OR.

The Informatics RN Supervisor should develop a daily report of incomplete/inaccurate data capture that rolls into a report card that can be used for OR Management to measure data capture effectiveness and implement required changes. Information on incomplete/inaccurate data capture is already reported, but in a fragmented series of emails that does not provide a total set of facts of number of incidents per staff member that can be acted upon by OR Managers to monitor, educate and provide disciplinary action when required. This feedback and education process is integral to data integrity.

The process for capturing delay and cancellation codes should be changed to ensure that only one individual is entering delay or cancellation codes for each patient. Delay and cancellation codes should be revised to provide a shorter list and more meaningful list which can be easily communicated for the purposes of driving changes to reduce incidents. Education module should be developed so that there is consistent application and interpretation of delay or cancellation reasons.

The focus should be on understanding the reason for and use of accuracy in data capture and not the activity itself.

Change in process, protocol or behavior/culture will only be embraced by key stakeholders when credible and reliable metrics are used as the foundation for building the imperative for change. Accurate and timely data capture needs to be a core competency of the OR and the OR management team needs to develop processes to analyze and interpret data to develop tailored solutions.

A comprehensive campaign should be launched immediately to begin to capture and measure delays in real time, conduct root cause analysis and develop long-term and sustainable processes that will provide reliable solutions.

CONCLUSION

Implementation of a performance improvement project will require engagement of key stakeholders – time and commitment on their part – and both personnel and monetary resources of the organization. The scope of work described herein is estimated to extend over a period of six to eight months and will vary greatly dependent upon the Hospital's ability to free up personnel to dedicate time to this effort, the availability of data and the ability to engage the key stakeholders. The potential revenue enhancements from additional surgery cases and cost reductions from staffing changes are estimated to be over $2 million.

OUTPATIENT CLINIC SERVICES

OUTPATIENT CLINIC SERVICES

SUMMARY

- ▲ Outpatient Clinic Services ("OCS") is spread into five separate facilities throughout the New Orleans area. The decentralization of OCS takes a toll on overall productivity of the entire Hospital.
- ▲ The community clinics are a valuable resource to the community, but converting them to Federally Qualified Health Centers may be beneficial to the Hospital.
- ▲ The organizational structure of OCS does not include the designation of a high level manager/administrator.
- ▲ OCS's Hospital Admission Technicians and Medicaid Assistance Program units are inefficient and lack an emphasis on the Medicaid eligibility process. Consolidation of these units with additional staff focused on Medicaid eligibility could result in a significant increase in Medicaid reimbursements.
- ▲ OCS benefits from strong nurses and nursing supervisors, but relies too heavily on the use of RNs where LPNs could serve the same function.
- ▲ OCS has the potential to grow and it should do so through centralization of services and the creation of additional centers of Excellence.
- ▲ OCS's daily workflow processes are negatively impacted by a large amount of manual paperwork and the lack of a complete Electronic Medical Record.

RECOMMENDATIONS

- ▲ The Hospital should explore and develop a strategic plan aimed at developing a comprehensive plan for its outpatient programs.
- ▲ The Hospital should explore the option of converting its community based clinics into Federally Qualified Health Centers ("FQHC").
- ▲ The Hospital should consolidate the functions of the Medicaid Application Process with the admission process and generate higher Medicaid reimbursements.

- ▲ The Hospital should change its nursing staff mix to utilize LPNs rather than RNs for direct patient care in the OCS.
- ▲ The Hospital should aim to increase the overall productivity of the OCS.
- ▲ The Hospital should designate a senior-level manager for OCS with the responsibility for day to day operations.
- ▲ The Hospital should develop a strategic plan to grow its outpatient programs.
- ▲ The Hospital should enhance the capabilities of the CLIQ system in anticipation of the creation of a system wide EMR.

BACKGROUND

Outpatient Clinic Services ("OCS") care providers are becoming an increasingly important part of the U.S. healthcare system.[1] As technology has progressed, treatments that were previously offered only in the hospital are now possible in the outpatient setting.[2]

At the Hospital, OCS is a major strategic initiative and critical to how it meets its mission of delivering healthcare to the community. Before moving on to the bulk of this review it is important to set the framework for what an effective OCS program should look like. As is discussed below, there are five key aspects that contribute to a successful OCS program.

While overall operational efficiency may be improved by moving certain procedures out of the hospital to the less expensive outpatient setting, it is important to understand that the pace of change in technology and reimbursement systems has often left safety-net providers scrambling.[3] Although Medicaid managed care has introduced incentives for preventive care and nonhospital based treatment for publicly insured patients, other mechanisms for reimbursing providers of care to the publicly insured and the uninsured have been slower to evolve.[4] Due in part to the constraints imposed by the funding

[1] *See,* Ormond, Barbara A., Lutzky, Amy W., *Ambulatory Care for the Urban Poor: Structure, Financing, and System Stability*. (2009, June). In *Washington DC: The Urban Institute*. Retrieved 13:09, March 16, 2009, from http://www.urban.org/UploadedPDF/occa49.pdf.
[2] *Id.*
[3] *See id.*
[4] *Id.*

sources on which they depend, safety-net systems have had fewer options for realizing the efficiencies offered by the shift away from hospital-based care.[5] Realizing the efficiencies offered by the shift away from hospital-based care and creating a successful outpatient program depends on several factors, including:

- ▲ Quality of Administration – Strong leadership is important to ensure accountability and system-wide cohesiveness across the many disciplines that may be offered in the OCS setting.

- ▲ Operational Planning and Improvement – As more services are offered in the OCS setting it is critical to have thoughtful foresight and a keen sense of direction to continue the ability to deliver services that will be in demand in the future.

- ▲ Ease of Access – The ease with which customers navigate and access the health services that are critical to them is important.

- ▲ Physician Productivity – As clinics grow and reimbursement becomes more complex, a model for measuring physician productivity in the OCS should be established.

- ▲ Revenue Cycle – Streamlining the OCS's revenue cycle process is crucial to eliminating delays and ensuring payment for services.

Tenets of a Successful OCS Program

OCS Administrator

A senior level manager of OCS is necessary to ensure accountability and system-wide cohesiveness across the varying OCS disciplines. Specifically, this individual should maintain clinical and administrative responsibility for operations of OCS and coordinate these operations with other Hospital divisions to achieve the organization's mission. This supervision should also extend to the OCS's professional, technical and clerical personnel.

This ideal candidate for this type of position should be comfortable with the following position specific requirements (this list is illustrative):

- ▲ Participates in the development of policies for assigned OCS and implements hospital policy in the area of assignment.

[5] *Id.*

- Maintains total administrative responsibility for the optimum operational utilization and effectiveness of specified OCS, to include the onsite clinics and offsite clinic operations.

- Responsible for the systematic scheduling of a large number of specialty clinics by coordinating clinic personnel, space, and equipment in conjunction with operational and physician personnel schedules.

- Develops implements and monitors in conjunction with other providers, clinic registration procedures to assure comprehensiveness, timeliness, and compliance with the informational requirements set by the hospital and third party reimbursement agencies.

- Develops in conjunction with the finance department mechanisms to assure that reimbursement requirements are met within the mandated time limitations.

- Develops in conjunction with the Medical Records Division, Nursing and Hospital Information Services, systematic procedures to assure the expeditious flow of medical charts to and from the OCS.

- Responsible for assuring that the assigned OCS are in compliance with all standards and regulations set forth by the Joint Commission on the Accreditation of Healthcare Organizations and other regulatory agencies.

- Works with clinical staff to develop specialty clinics as well as innovative programs and procedures to make the clinics more responsive to the needs of the community.

- Develops implements and monitors statistical reporting systems that generate data on clinic utilization by incidence of disease, injury, patient origin, attending physician, etc.

- Responsible for assuring compliance with development of and continuous monitoring of quality assurance activities.

- Responsible for the preparation of the OCS Division budget.

- Recommends changes in administrative policies to better meet the goals and objectives of assigned OCS programs.

Operational Planning & Improvement

As more services are offered in the OCS it is critical to have thoughtful foresight and a keen understanding of the past to deliver what competitive ambulatory care markets will demand in the future. Operational planning and improvement provides assessment, design, and implementation assistance in the development of short-term and long-range OCS plans. OCS's healthcare professionals, quantitative analyses, and communication tools should be aligned with the organization's strategic, operational, and financial objectives to create practical tactics to effectively compete in their markets and sustain results.

Ambulatory Patient Access

The ease with which customers navigate and access the health services that are critical to them is important. Consideration should be given to redefining patient access to include evaluation across the following four parameters: 1) access to information, 2) access to the campus, 3) access within the facilities, and 4) access to processes needed to obtain services. Organizations through the identification of actionable steps have a positive impact on the bottom line, improve the relative ease with which patients, visitors, staff and physicians navigate, and relate to services and spaces, and assist in the prioritization of investments in operations and facilities.

Physician Productivity Analysis

As clinics grow and reimbursement becomes more complex, a model for measuring physician productivity in the OCS should be established. Key to the model is aligning physician compensation in a way that is easy to manage. Other aspects of the model should involve productivity expectations, market growth, and volume projections that make assumptions about performance more predictable.

The final business drivers for refining a physician compensation model are the physicians themselves. A proven approach for assessing physician compensation and productivity from a global perspective such as Relative Value Units ("RVU") should be used. RVUs are a numerical system for describing the value of a medical procedure for the purpose of assigning a price or charge.

The needs of all parties, including the physicians, should be recognized to develop a sustainable compensation model that promotes growth.

Revenue Cycle

Next to patient care, the revenue cycle is one of the most important processes for healthcare organizations. The path from scheduling a patient to getting paid for

those services performed is a long and complex one. It includes many front and back-office processes, numerous staff members, and occasionally months of delays. Streamlining of OCS's revenue cycle processes by reducing errors in pre-authorizations, physician referrals, filling deadlines, and collection processes is crucial.

PROCESS

The A&M team conducted an assessment of the Hospital's OCS with a focus toward identifying operational improvements, patient throughput improvement, cost reduction, and revenue enhancement opportunities. Data was reviewed and interviews were conducted with OCS employees and Hospital and System leadership.

Interviews were conducted with members of the following groups: 1) Hospital administrators; 2) individual physicians, residents, and nurses; 3) nursing leadership; 4) finance department personnel; 5) ancillary support services staff; 6) facility engineers; 7) medical directors of clinics from both the LSU and Tulane programs; and 8) individual patients.

This assessment primarily focused on the efficiency and productivity of the clinics located at the former Lord & Taylor ("L&T") department store. Additionally, reviews of key outpatient programs at the former University Hospital, the Community Clinics, the HIV Outpatient Clinic ("HOP"), and the Obstetrics-Gynecology ("OB-GYN") clinic were also conducted.

FINDINGS

The Hospital's OCS programs are vital to its mission of providing access to healthcare within the immediate and surrounding communities. The chart below identifies the Hospital's current OCS facilities.

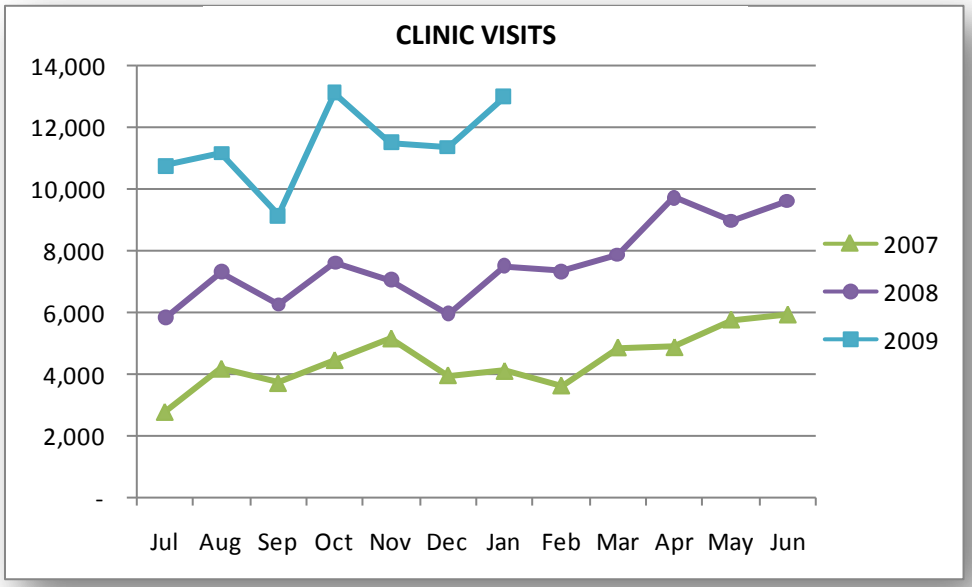
Location	Address	Sq Ft	Annualized Visits	Clinic
HIV Outpatient Clinic	136 South Roman Street	48,392	19,762	Cardiology CHF CT Surgery Dental HOP Gastrointestinal Hepatology HOP (HIV Outpatient Clinic) Pulmonary Renal Dialysis
Lord & Taylor	1450 Poydras Street	78,000	23,392	Allergy Breast & Cervical Coumadin Dermatology Endocrine General Surgery Medicine Neurology Neurosurgery Ophthalmology Orthopedics Plastic Surgery Podiatry Radiology Rheumatology Stroke & Heart Attack Prevention (SHAP)
LSU Public Hospital	2021 Perdido Street	42,000	19,794	Dental (L) Diagnostic Treatment ENT (Ear, Nose and Throat) Oncology - Chemo Urology
Medical Office Building	2020 Perdido Street	16,848	21,598	OB/GYN
Community Clinic	1911 Hendee Street 3815 Burgundy Street 5501 Read Boulevard 6460 North Claiborne Avenue 725 Valette Street	19,950	17,438	Murray Henderson Frederick Douglas New Orleans East Jackson Barracks Martin Behrman

Overall efficiency and productivity are being affected by the Hospital's fragmented use of facilities to provide multiple access points within the city and surrounding communities. The OCS platform is decentralized and often housed in temporary and inefficient facilities. While access to clinic services is important to the Hospital's mission of serving the community, the operating inefficiencies of the current facilities are taking an enormous toll on the productivity of the entire Hospital.

Outpatient Clinic Facilities

Lord & Taylor

The outpatient program has grown dramatically over the past year. With the opening of the L&T facility in May 2008, the Hospital now has a dedicated clinic facility to provide care for the medically indigent population. The graph below illustrates the growth from FY 2007 to January 2009.



After clinic operations were moved from the Hutchinson facility, focus was placed on making quick, reactionary improvements to the L&T facility. While those improvements have been significant, the layout of the L&T facility is still not conducive to an efficient throughput of a high-volume outpatient clinic program.

Despite efforts by facility planning staff and clinic personnel to convert the former department store into a functional outpatient center, the facility remains limited by its retro-fitted layout and design. Patient privacy and the efficiency of the clinic operations are the two of the top areas negatively impacted by this design.

The approximate 117,000 square feet of space at the L&T facility, of which two-thirds (78,000 square feet) is for the OCS, is approaching maximum utilization. With clinic space at a premium, the use of this facility for Hospital related back office departments including Central Medical Records, Security, Coding, Patient Relations, Disease Management, Telemedicine, Payroll, Medicaid Application Process ("MAP"), and Physician Billing should be reviewed. It was reported that this space was not used for patient service areas because of the lack of adequate plumbing and issues related to obtaining leasehold improvements.

University Medical Office Building

The University Medical Office Building ("UMOB") is under construction and is scheduled to open August 2009. The intent of bringing the UMOB online is to ease the congestion in the former University Hospital's existing inpatient and outpatient programs. Current plans call for approximately 25,000 square feet or 25 percent of this facility to be dedicated to outpatient programs. This plan includes space on the fifth floor which encourages fast track patients to be transferred from the ER via elevator to the UMOB.

Additional Outpatient Facilities

There are two additional outpatient programs located in the downtown area. The HIV Outpatient Clinic ("HOP") is located on South Roman Street and the OB-GYN clinic occupies two floors of a building near the former University Hospital.

These facilities are in a state of disrepair and not designed for outpatient programs. As an example, the first floor of the OB-GYN clinic has visible signs of mold and, therefore, cannot be used for outpatient services.

These facilities do not provide a long-term solution for either HOP or OB-GYN. The HOP clinic is currently located in the footprint of the new hospital site and will eventually be relocated. Current plans for the OB-GYN clinic call for expansion into a modular facility, but that will be a temporary solution.

Maximizing the efficiency and productivity of OCS is problematic because of its multiple locations throughout the downtown area and low volume relative to fixed staffing. Medical Records and Security are just two areas that demonstrate inefficiencies caused by operating multiple OCS locations.

In FY 2008 there were more than 124,000 requests for Medical Records to provide records for patients seen in the multiple OCS locations. The process of identifying, pulling, delivering, and returning these medical records is costly and impacts the overall efficiency of the Hospital.

Providing a secure environment at multiple OCS facilities is a staffing challenge with a significant cost. While security personnel are necessary at the individual sites, a reduction of officers could be achieved by consolidating OCS.

Community Clinics

With monetary support from FEMA and several charitable foundations, the community clinics were developed to return primary care services to those areas devastated by Hurricane Katrina. Currently, these community clinics are staffed with salaried physicians, nurses, and clerical support.

Five of these clinics serve communities at large, while one clinic serves students attending O. Perry Walker High School. The five community clinics include:

Facility	Open Date	Visits		Neighborhood
		FY 08	YTD FY 09*	
Jackson Barracks	01/24/08	1,313	1,999	Lower 9th Ward
Martin Behrman	02/25/08	406	1,430	Berhman (West Bank)
Frederick Douglas	01/24/08	1,030	1,990	Upper 9th Ward
Murray Henderson	03/03/08	543	1,456	West Bank
New Orleans East	04/28/08	812	3,527	New Orleans East
Total Visits		**4,104**	**10,402**	

* January 2009 YTD

Onsite tours were conducted at the Murray Henderson and New Orleans East clinics. Although small, these clinics provide invaluable service to their community. For many of the patients serviced by these clinics, this is the only option for accessing primary care services.

Some of these clinics are housed in modular trailers which have a small and limited number of exam rooms, thereby limiting capacity. Each are staffed with a nurse and LPN, two primary physicians, clerical support and security.

The volume of patients seen in these clinics is relatively low in relation to Hospital-based (downtown locations) clinics. Combined volume of the community clinics represents roughly 14 percent of total. The payer mix of the community clinics is predominately compromised of uncompensated care nearly 45 percent and self pay is nearly 34 percent.

One clinic only serves students at O. Perry Walker High School.

Facility	Open Date	Visits		Neighborhood
		FY 08	YTD FY 09*	
O. Perry Walker	10/22/07	1,273	727	West Bank

* January 2009 YTD

This facility is located within the high school and referrals to the clinic are made by the School Nurse. Staffing at this clinic includes an RN, LPN, social worker, physician, and clerical staff. This program is popular with parents and students alike and is funded with grants that must be periodically renewed, assuming funds are available. However, because of the low number of visits and fixed staffing mix, cost per visit to this clinic is high.

Outpatient Clinic Workforce

Outpatient Organization Structure

The organizational structure of OCS does not include the designation of high-level manager/administrator. The clinics are managed by nurses and are provided support by other functional areas that do not report directly to nursing. The Hospital Admission Technicians ("HAT") unit and the Medicaid Assistance Programs ("MAP") unit report directly to the CFO.

There is a Medical Director for Ambulatory Services, but that individual does not make decisions on all issues related to the OCS.

Nursing staff that manage the clinics on a daily basis, ancillary departments for pharmacy, lab, radiology and finance support departments like medical records, Hospital Admission Technicians and Medicaid Assistance programs all report to a variety of administrative individuals. Physician management of the clinics is decentralized and individual clinics report to various Medical Directors.

This reporting structure, with its many layers and managers, makes it difficult to influence productivity and performance of OCS.

A senior-level manager dedicated to OCS may be a good investment to ensure appropriate level of cohesive management, oversight and accountability for an efficient, effective operation.

Hospital Admission Technicians and the Medicaid Assistance Program

Efficient use and proper training of HAT and MAP units is crucial to the function of OCS because they begin the process of admitting patients, qualifying a patient for Medicaid, and collecting data that is used for the first stage of the revenue cycle process.

For purposes of information flow and reimbursement, proper entry of information is vital because the Hospital is fragmented into many different locations and relies on good information for billing and collecting. With a high number of indigent patients, it is important that the Hospital ensure patients properly complete the Medicaid application process.

The HAT function reports to the supervisor in charge of Admissions and the MAP function reports to the supervisor in charge of Physician Billing. Both supervisors report directly to the Chief Financial Officer ("CFO").

While these two groups report directly to the CFO, there is a lack of coordination, specifically, as it relates to the identification of potential outpatient Medicaid patients. Currently, HATs bypass the MAP unit altogether and process the majority of patients into the free care program. Only one FTE is dedicated to the

outpatient Medicaid application process at the L&T facility, and that FTE is significantly underutilized.

The Hospital does a good job of identifying Medicaid candidates in the inpatient and emergency department, but lacks sufficient staff to accomplish similar results for OCS.

By using the inpatient statistics as a guideline for the potential number of Medicaid outpatients (see below), there is a significant opportunity to improve the bottom line by qualifying patient for Medicaid services.

	Outpaient Visits*	Payor Mix	Inpaient Days*	Payor Mix
Medicaid	12,105	18.09%	17,663	45.73%
Self-Pay	44,859	67.03%	12,031	31.15%
Other	9,961	14.88%	8,927	23.11%
Total	**66,925**	**100.00%**	**38,621**	**100.00%**

* YTD December 2008

If the outpatient payer mix shifts by 15 percent or converts 20,000 visits from Self-Pay (free care) to Medicaid, this could potentially enhance Medicaid reimbursement by almost $3.7 million. This change would require additional MAP technicians.

The Tables below illustrate changes in Net Patient Service Revenue and Payor Mix if increments of 5,000 visits are converted from Self-Pay (free care) to Medicaid.

*Net Patient Service Revenue (NPSR)	NPSR Annualized	Increase Medicaid and Reduce Self Pay Visits by 5,000	10,000	15,000	20,000
Medicare	1,148,680	1,148,680	1,148,680	1,148,680	1,148,680
Medicaid	4,534,085	5,467,903	6,401,722	7,335,540	8,269,358
Indigent/Self Pay	443,892	441,249	438,606	435,964	433,321
Other	581,065	581,065	581,065	581,065	581,065
Total	**6,707,722**	**7,638,897**	**8,570,073**	**9,501,248**	**10,432,424**

Number of Visit Payor Mix	Annualized	Increase Medicaid and Reduce Self Pay Visits by 5,000	10,000	15,000	20,000
Medicare	9.69%	9.69%	9.69%	9.69%	9.69%
Medicaid	18.09%	21.81%	25.54%	29.26%	32.99%
Indigent/Self Pay	67.03%	63.30%	59.58%	55.85%	52.13%
Other	5.20%	5.20%	5.20%	5.20%	5.20%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

*Net Patient Service Revenue is based on FY 2008 Collection Rates** (Gross Charges X 2008 Collection %)
**FY 2008 Collection Rates: Medicare 30.48%; Medicaid 43.35%; Self Pay WAvg 2.06% & Other W Avg 25.95%

Nursing

The OCS benefits from strong nurses and nursing supervisors. With OCS spread over five locations, the nursing staff is key to direct patient care for the medically indigent.

Even though the care is currently decentralized, there are three areas which warrant immediate consideration to reduce expenses and promote efficiency: nurse staffing mix, ratio of supervisors to workers, and the overall productivity of the clinics. These changes will take time to implement, but they can be made without impacting patient care.

Nursing Staff Mix

A reasonable benchmark for the nursing staff mix in an OCS is four support personnel to one RN.

The Hospital currently places a greater emphasis on the use of RNs in the OCS. The current patient care model has RNs performing tasks that should be assigned to LPNs and/or medical specialists. Understanding that RNs can perform more clinical functions than LPNs, there is an increased expense to utilizing a heavily weighted mix of RNs. Each clinic should be analyzed to determine the optimal staffing mix.

The chart below illustrates staffing mix which exceeds the four support personnel to one RN ratio.

CLINIC	# of RNs	# of LPNs
Urology	3	3
Cardiovascular	4	4
Neurology	4	4
Oncology	8	4
OB-GYN	6	28

On the positive side, the OB-GYN clinic staffing mix is more appropriate.

Nursing Supervisors

For the OCS, the number of nursing supervisors is high when compared to the volume of visits. This problem developed with the rapid addition of new clinics over the last eighteen months and the decision to hire RN supervisors and coordinators to implement those programs. Below are the existing reporting structures and numbers of supervisors in the nursing OCS:

Position	# of Employees
VP of I/P and O/P Nursing	1
ANA	1
RN Manager	4
RN Supervisors	2
Program Coordinators	2
Clinical Coordinators	6
Nurse Practitioners	6

The number of supervisors is adding unnecessary layers of management to the OCS. Typically, there would be a Nurse Manager with Charge RNs for various units, specialties or sections. The roles and responsibilities of these supervisory and coordinator level personnel need to be further examined and reviewed.

Productivity of Nursing Units

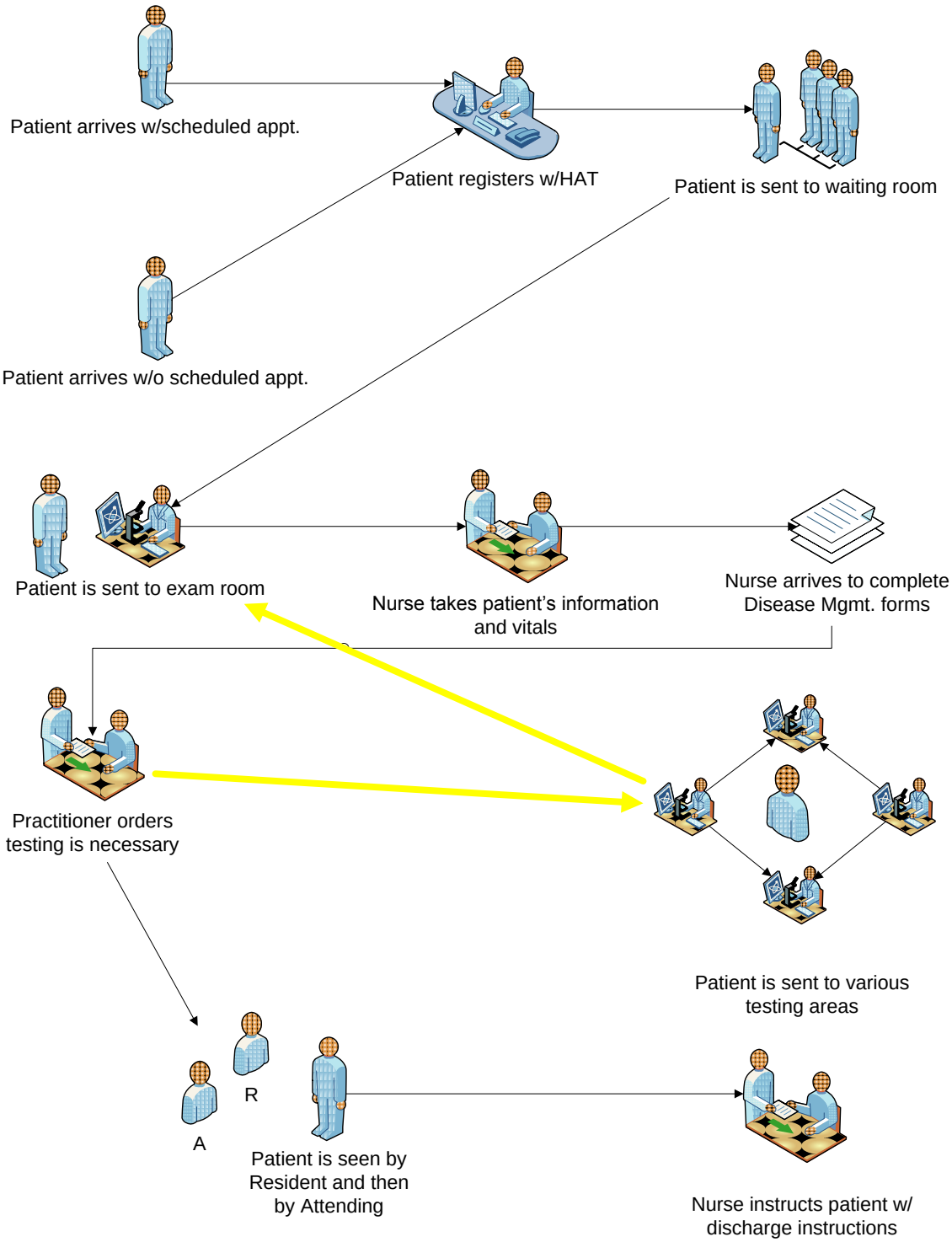
Productivity of the OCS is hampered by work flow and operational difficulties due to different geographic locations, as well as systems used to schedule appointments and the excessive use of paper forms.

It is not unusual for the clinic to open in the morning to a rush of patients. Although there is a RN supervisor for scheduling, a combination of factors negates the schedule and the OCS is left to react to the rush and become overwhelmed by the volume of patients. The manner in which the patients are scheduled is fostering this problem because clinic personnel are over scheduling based on historical no-shows, while not accounting for walk-in volume. A better scheduling process could be developed to properly schedule patients and, thereby, reduce the early volume spike and the associated staffing requirements.

Productivity could also be improved by reducing the number of forms, surveys and paperwork completed on each patient. Nurses spend an inordinate amount of time interviewing patients and filling out forms and, this process is repeated if the patient goes to a second clinic during the same day or following week. Nursing Management believes these forms are critical to guarantee quality of care provided in the OCS. An assessment of the necessity and value of the forms process should be undertaken.

A diagram of how a patient visits are managed at the L&T facility is provided on the next page. There are opportunities for further study of this flow to make it more efficient for both patients and clinical staff.

Flow of Patient Visits at L&T Facility



Expanding OCS

Strategy for Growing Outpatient Clinical Services

As the population of the Metropolitan Area continues to grow, the Hospital should explore measures to judiciously expand the OCS.

Developing additional Centers of Excellence would be an important component in the program to attract new patients. A 20 percent increase in outpatient visits could generate $1.4 million of additional revenue.

A 1 percent increase in inpatient referral activity created by increased OCS visits would generate an additional $923,000 in revenue to the System. A 1 percent increase in outpatient surgery created by increased OCS volume would generate an additional $58,000 in revenue to the System.

Centralization of existing outpatient programs and expanding capacity will also increase OCS visits. One possibility for creating capacity is to lease additional retail space at the New Orleans Centre Mall. Expansion into such space would be a logical step in the growth of outpatient services since the clinics are critical to the patient care model for the Hospital and teaching residents.

Electronic Medical Records

Proper storage and updating of medical records is important to continuity of care and privacy. Using modern technology can greatly improve the efficiency of the resources needed to manage these records.

The Hospital currently relies on the Clinical Inquiry ("CLIQ") system to electronically manage patient data. CLIQ is enthusiastically used by clinicians and nurses and shows the potential of how a full scale electronic medical record could be used at both system and Hospital levels. By expanding CLIQ's capabilities, it would decrease the manual processes performed by nurses and residents.

As an example, the referral system to other clinics is manual. If CLIQ could be expanded to automate the referral process, considerable time would be saved. The question to consider is the cost benefit regarding the timing and size of an outpatient electronic medical record system verses the cost of upgrading and expanding the CLIQ system.

Disease Management Program

The Disease Management program is a systematic approach to care for patients with particular diseases. It is based on treatment protocols that emphasize clinical and non-clinical intervention for which there is the greatest impact on improving and maintaining the patient's health. The program has wide support,

has been funded for over ten years, and is considered a model for safety net hospitals nationally.

The primary issue with the administration of the program is that a significant amount of time is spent surveying the patients. This adds to the nursing paperwork workload and associated cost of additional FTEs required to staff.

RECOMMENDATIONS

The Hospital should explore and develop a strategic plan aimed at developing a comprehensive plan for its outpatient programs.

An additional 100,000 square feet of space is available at the New Orleans Centre Mall in the former Macy's department store. Expanding to this space would allow the Hospital's OCS to be housed in one location. This expansion could include consolidation of the clinics operating at 136 South Roman Street and the former University Hospital and UMOB. This consolidation would improve workforce efficiency and reduce operating expenses in areas such as security and medical records.

The next step is to develop a specific proposal to identify savings associated with this consolidation as well as the revenue impact from additional Centers of Excellence and new outpatient programs.

The Hospital should explore the option of converting its community based clinics into Federally Qualified Health Centers ("FQHC").

There are currently eleven FQHCs in Orleans and Jefferson Parishes. These clinics are funded by grants under Section 330 of the Public Health Service Department. By statute, they receive enhanced reimbursement from Medicare and Medicaid. The Board of Directors of these centers is controlled by community representatives and personnel must be independent of any hospital.

Nationally, this model has been used to fund low income clinics and meet the needs of uninsured. Additionally, since FQHCs are geared toward indigent patients, there is a tendency for these organizations to refer patients to nearby safety-net hospitals. The Hospital should conduct a feasibility study to determine the benefit of converting the community-based clinics into the FQHC model which may promote the long-term stability of the clinics and eliminate these operating costs from the Hospital.

The Hospital should consolidate the functions of the Medicaid Application Process with the admission process and generate higher Medicaid reimbursements.

Consolidating these units would provide a streamlined process of registering the patient and ensuring the appropriate processing of a qualified application for

Medicaid assistance. With a potential financial impact of $3.7 million annually there should be an immediate focus on this change.

As an alternative to adding additional FTEs in this area, one solution could be to outsource the management of the entire process to an outside professional services firm. Many hospitals around the country outsource these functions because of the difficulty of tracking patients and getting them to complete the application process. These firms earn their fees based on the percentage of additional Medicaid volume that is qualified, typically around 15 percent of new Medicaid reimbursements. Using the previous example of an increase of 20,000 annual visits paid through the Medicaid Program, the cost of the services would be approximately $560,000 for total Net Patient Service Revenue of $3.1 million after fees. This should be considered as an alternative solution to increase Medicaid reimbursements.

The Hospital should change its nursing staff mix to utilize LPNs rather than RNs for direct patient care in the OCS.

Two ways to accomplish this goal are by attrition and by hiring more LPNs as additional positions are required to staff new clinics. First, nurse staffing ratios for new clinics should be established to have a RN only supervise and LPNs provide direct patient care. Second, RN vacancies should be filled with LPNs based on a revised nurse-staffing ratio designated by the clinic. To illustrate possible savings, if all current RNs were converted to LPNs the total annual savings would be $1.26 million.

RN Conversion Analysis	MCLNO
Total O/P RN FTEs	43.88
Average RN Salary	71,299
Average LPN Salary	42,478
FTEs RN Total Salary	3,128,601
FTEs LPN Total Salary	1,863,943
Total Savings	1,264,658
Percentage Savings	**40.42%**

The Hospital should aim to increase the overall productivity of the OCS.

Based on staffing in the clinics, opportunity exists to increase capacity of daily visits without an increase to staffing levels. To accomplish this increase in visits, a defined strategic or marketing plan should be developed that focuses on capturing additional clinic visits, either from market share leakage in the Hospital

today, inappropriate utilization of the emergency department, and more importantly promoting the clinics in the community at large.

Using a benchmark of two hours per visit, an increase of over 30,000 visits would maximize the capacity of the clinics under current staffing plans and increase Net Patient Service Revenue by $1.4 million assuming the current Payer mix. The chart below provides a summary to illustrate the above.

	YTD Visits Annualized	Paid FTEs	Man Hours Statistic	Proposed Visits	% Increase in Visits	Proposed Incrs in NPSR
Ambulatory Clinic	134,219	159.19	2.00	162,355	20.96%	1,406,114
Administration		11.27	0.10			

Given a benchmark of two hours per visit, it is reasonable that the current staff could manage an additional 20 percent increase in patient visits as illustrated above or could reduce 20 percent of the FTEs assigned to the OCS saving $1 million as illustrated below. If clinic visits cannot be increased, consideration should be given to reducing the staffing in the clinics to ensure efficient workforce productivity.

	YTD Visits Annualized	Paid FTE	Man Hours Statistic	Proposed FTEs	Proposed FTE Reduction	Proposed Exp Reduction
Ambulatory Clinic	134,219	159.19	2.00	129.06	30.13	862,854
Administration	134,219	11.27	0.10	6.45	4.82	138,044

The Hospital should designate a senior-level manager for OCS with the responsibility for day to day operations.

OCS is a major service line for the Hospital with an impact to many different aspects of the organization, *i.e.*, inpatient referrals, surgery cases, emergency department visits, resident training, and community perception. By designating an administrative responsible for OCS, the Hospital will ensure greater fiscal control and operational efficiency. After the appointment of the senior-level manager for OCS, an organizational structure change can be initiated that would provide for physician, clinical, support services, and financial input to reduce operational inefficiencies.

The Hospital should develop a strategic plan to grow its outpatient programs.

As the metropolitan area's population returns to pre-Katrina levels, the Hospital should develop a strategic plan to grow OCS. Short term goals could be realized by consolidating existing clinic programs into additional space at the former New Orleans Centre Mall. Long term goals could be realized by creating Centers of Excellence over a broad definition of disciplines. As indicated earlier, a 20 percent increase in outpatient visits would generate $1.4 million. A 1 percent increase in inpatient activity created by increasing OCS visits would generate $923,000 more revenue to the Hospital. A 1 percent increase in outpatient

surgery created by increased OCS volume would generate an additional $58,000 in revenue to the System.

Developing a strategic plan for OCS will focus attention on meeting the needs of the community for access to primary care, continuing the disease management program goals, provide for training requirements for the residency program, referrals for inpatient hospital services, and overall improvement in the financial results of the Hospital.

The Hospital should enhance the capabilities of the CLIQ system in anticipation of the creation of a system wide EMR.

A modest enhancement of the CLIQ system is recommended while evaluating and implementing a comprehensive system-wide electronic medical record. If an EMR vendor is selected within the year, as has previously been indicated by the System's Chief Information Officer, the Hospital should serve as the beta site for the introduction and development of the EMR.

Because of the high volume of OCS patients, and decentralization of the OCS, the initial stages of the EMR should be focused on the outpatient programs at the Hospital. If the EMR proposal is delayed, the institution must continue to grow the CLIQ system.

CONCLUSION

A comprehensive and focused effort to improve OCS could result in an overall increased reimbursement and cost reduction for the Hospital of $5 million:

- ▲ $3.1 million in estimated Medicaid reimbursements;
- ▲ $1.4 million in increased clinic visits; and
- ▲ $1.3 million in staffing changes.

Additional cost reductions could be realized with the conversion of the community clinics to FQHC status and centralizing OCS in one location.

In addition, a 1 percent increase in inpatient activity created by increasing OCS visits would generate $923,000 more net revenue to the Hospital. Moreover, a 1 percent increase in outpatient surgery created by increased OCS visits would generate an additional $58,000 in net revenue.

DECISION SUPPORT SYSTEMS

DECISION SUPPORT SYSTEMS

SUMMARY

- ▲ The Hospital's current use of real time data to support decisions regarding its finances and operations is inadequate.
- ▲ Decision Support Systems ("DSS") are a class of electronic information systems that support business and organizational decision-making activities.
- ▲ DSS can be beneficial in improving the overall quality of an organization's internal decision-making processes.

RECOMMENDATIONS

- ▲ The Hospital's Information Technology ("IT") Department should be granted access to all systems that it does not currently have access to.
- ▲ The Hospital should make better use of the data and reports that can be generated by its current systems and implement a training program designed around teaching administrators how to use and access that information.
- ▲ The Hospital should implement a DSS to ensure that its Administrative and Department Director leadership are using real time data to make informed decisions.

BACKGROUND

In today's tough economic conditions, hospital administrators must make effective use of real time data to support decisions regarding the use of a hospital's financial and operational resources.

Decision Support Systems ("DSS") are a class of electronic information systems that support business and organizational decision-making activities.[6] A properly designed DSS is interactive and helps decision makers compile useful real time

[6] Decision support system. (2009, February 16). In *Wikipedia, The Free Encyclopedia*. Retrieved 17:35, February 18, 2009, from http://en.wikipedia.org/w/index.php?title=Decision_support_system&oldid=271179663

information from raw data, documents, personal knowledge, and/or business models to identify and solve problems and make decisions.[7]

Proper use of real time data can be beneficial to improving the overall quality of an organization's internal decision-making processes.

Typically, information gathered and presented by a DSS can include: real time inventory information; comparative statistics over a range of time periods; comparative statistics and benchmarks of similarly positioned organizations; real time financial forecasts and revenue and expense projections; and/or the benefits and consequences to alternative decisions or new projects.

Types of Decision Support Systems

There are several types of DSS that can be molded to fit the needs of the organization, including:

- **Passive DSS** – Aides the decision making processes by only revealing the data available and cannot be manipulated to arrive at explicit decision suggestions or solutions.

- **Active DSS** – Aides the decision making process by analyzing the data available and generating suggestions and solutions based upon that data.

- **Cooperative DSS** – Aides the decision making process by allowing the decision maker to modify, complete, or refine the decision suggestions provided by the system before sending them back to the system for validation. Here, both the human and computer components work together to identify the best solution.

- **Model Driven DSS** – Aides the decision making process by emphasizing access to and manipulation of statistical, financial, optimization, and/or simulation models. This system uses data and user provided parameters to help decision makers analyze situational data that may otherwise be overwhelming and intensive.

- **Communication-Driven DSS** – Aides the decision making process by supporting multiple users working on a shared task. This system

[7] *Id.*

support collaboration between decision makers to identify solutions and/or strategies.

- **Data-Driven DSS** – Aides the decision making process by allowing access to and manipulation of specific time series of internal and sometimes external data to fit the decision maker's needs.

- **Document-Driven DSS** – Aides the decision making process by managing, retrieving, and using unstructured information in a variety of electronic formats, such as text documents, spreadsheets and database records, to generate decisions and manipulate information to refine strategies.

- **Knowledge-Driven DSS** – Aides the decision making process by presenting problem solving expertise stored as facts, rules, procedures, or in similar structure.

Development and Framework

An organization should understand that a DSS requires certain technological and human resources investments as well as a step-by-step developmental approach to ensure proper implementation of the system.

I. Technological Investments

There are certain types of technological investments (hardware and software) that are necessary for the implementation of a DSS.

- **Specific DSS** – Involves choosing the actual application that will be utilized by the users. This part of the application allows the decision maker to make decisions in a particular problem area and the user can act upon the particular problem.

- **DSS Generator** – Involves choosing the hardware and software environment that is necessary for people to easily develop specific DSS applications and case tools or systems.

- **DSS Tools** – Involves lower level hardware/software including special languages, function tables and libraries and linking modules.

II. Human Resources

The implementation of any new system requires an organization to invest in certain human resources to manually implement and maintain the system throughout its life span. A DSS is no different and requires the following roles be filled to properly implement, maintain, and use the system:

- **DSS Developer** – This individual is responsible for designing the DSS to fit the organization's structure and serves to ensure the DSS evolves to fit the needs of the organization as it changes.

- **System Expert & Technical Supporter** – This individual is responsible for managing and supporting all facets of the mechanical components of the DSS.

- **Intermediary** – This individual is responsible for monitoring and reviewing the system's output of data to the end user. This individual is also responsible for ensuring data input into the system is adequate enough to create sufficient output. This individual is also responsible for receiving and managing requests for output based on the needs of the organization.

- **End User** – These individuals are responsible for inputting data into the system and utilizing output to support their decisions.

III. Developmental Approach

Implementation of a DSS should involve incremental and iterative development.

Incremental development allows a system to be developed and implemented over time with individual parts being integrated as they are completed. Incremental development allows users to gradually become comfortable with a system and avoids a "big bang" introduction that may intimidate some users.

Iterative development allows a system to be re-worked after users have had the chance to test it and provide feedback, whereas user feedback is not necessarily considered in incremental development.

Both of these developmental approaches work well together and allow the DSS to be changed and redesigned at various intervals to meet the needs of the users.

The buildup of a DSS can be classified by the following characteristics:

- **Inputs** – Inputs are used so the DSS can have factors, numbers, and characteristics to analyze.

- **User Knowledge and Expertise** – User knowledge and expertise allows the system to decide how much it is relied on, and exactly what inputs must be analyzed with or without the user.

- **Outputs** – Outputs are used so the user of the system can analyze the decisions that may be made and then potentially make decision.

- **Decision Making** – Decisions are made by the DSS, however, it is ultimately made by the user to decide which criteria it should use.

Benefits of DSS

There are many benefits to a DSS, including:

- **Improving Efficiency** – Implementation of a DSS can improve efficiency by generating output reports that demonstrate current cost structures in comparison to internal and external benchmarks, and/or other similarly positioned organizations.

- **Expediting Problem Solving** – Implementation of a DSS can expedite problem solving by generating reports that demonstrate the organizations current financial and operational position, allowing users to identify areas requiring change.

- **Facilitating Inter-departmental Communication** – Implementation of a DSS can facilitate inter-departmental communication by allowing departments to compare themselves to other departments and the organization as a whole. Implementation could also foster department-to-department peer review which could benefit the organization as a whole.

- **Promoting Learning and Training** – Implementation of a DSS can promote learning and training by helping members of the organization understand the types of data available and the types of data that can support decisions. This will also push members of the organization to go out and request training to obtain data themselves.

- **Increasing Organizational Understanding and Control** – Implementation of a DSS can increase organizational understanding and control by allowing departments to measure themselves in comparison to internal and external benchmarks and/or other similarly positioned departments inside similar organizations. This could push departments within the organization to perform better and meet the expectations set forth by the administration.

- **Generating Evidence to Support Decisions** – Implementation of a DSS can help decision makers generate statistical data and models to support proposed decisions.

- **Identifying New Approaches to Thinking About Problems** – Implementation of a DSS can help decision makers by identifying and generating different scenarios and projections. This could help decision makers determine the results of a decision prior to making or implementing the decision.

PROCESS

The A&M team conducted a review of the Hospital's data reporting and recording systems and conducted face-to-face interviews with key Hospital employees who rely on the types of data and reports that could be generated by a DSS.

In addition to gathering data on DSS, the A&M team spent a considerable amount of time requesting data to complete this assessment. The time our team spent gathering information (where reliable information was available) revealed not only a delay in accessibility of data but discrepancies in the data. Both accessibility to data and discrepancies in data underscores the Hospital's need for a DSS.

FINDINGS

Easy access to real time data and statistics is necessary to efficiently manage any organization. Data and statistics can provide a snapshot or summary of an organization's financial position and help administrators make informed decisions. Data is also helpful in forecasting and projecting an organization's future financial position and identifying those operational and financial areas requiring improvement.

Data Reporting Systems Currently Capable of Being Generated by Hospital Systems

At the start of any financial and operational assessment it is necessary to collect data that can be used to identify the overall financial and operational health of the organization. The type of data that is usually requested is generic in nature, industry specific, and in most cases should be readily available. On most occasions these types of data are housed in accessible databases and can be easily manipulated to generate reports based on specific periods of time. The findings of these reports, therefore, can then be compared to existing budgets and internal and external benchmarks the organization is striving to reach.

In trying to obtain data sources related to the Hospital, our team experienced several difficulties and found there is a system-wide lack of understanding as to why data is collected and how it is used to measure the Hospital's financial and operational stability.

Like the generation and use of financial reports, an organization should implement common accounting techniques such as budgeting, forecasting, and projecting to peer into the future and review its current financial status. An organization can also utilize external benchmarking to compare itself to similarly positioned organizations at national and regional levels.

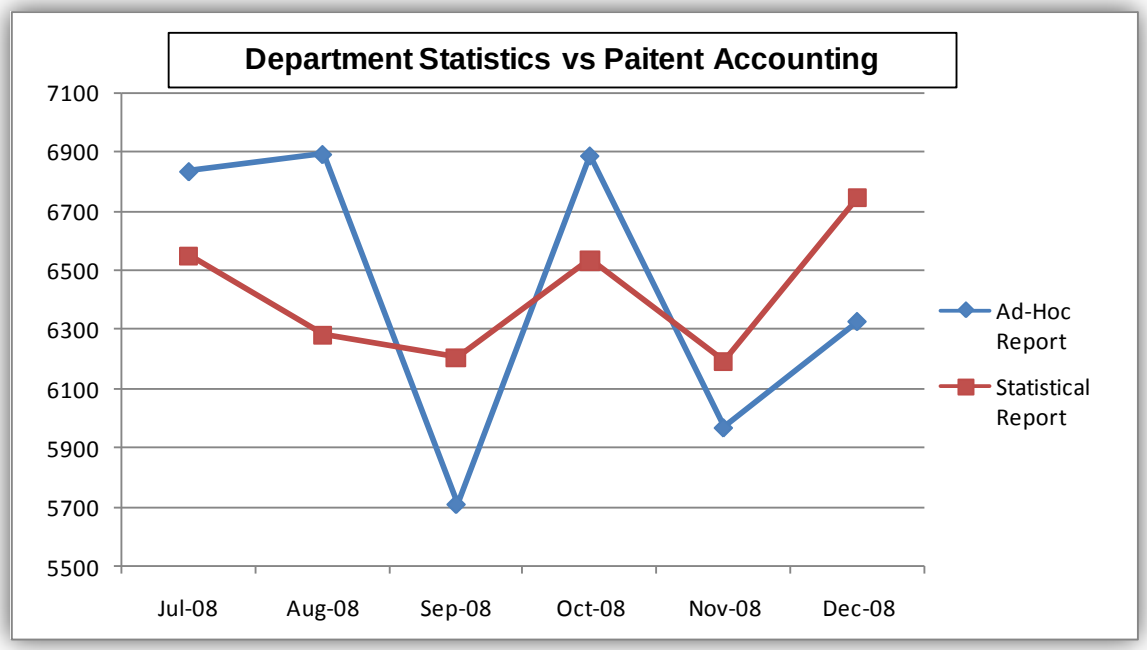
Currently, the Hospital's various departments do not use budgets or benchmarking to compare themselves to departments in similarly positioned organizations and our team experienced great difficulty in trying to locate these data. In one data search, for instance, our team discovered that the Hospital does not have the ability to compare itself to external benchmarks because the Hospital does not report to the benchmark reporting database any longer. The organization is not receiving the maximum benefit of dues paid.

Data and Statistics Currently Available at the Hospital

Our team also discovered many of the Hospital's departments engage in excessive amounts of manual processes to collect data and rarely rely on existing data from the internal databases.

On one occasion, our team interviewed a member of the Policies and Planning Department who compiles data for the monthly Departmental Statistic Report. During our meeting we learned the head of each department manually creates a monthly spreadsheet that is submitted to the Policy and Planning Department. The authenticity of the data in this report is never verified, aside from the

department head's signature. There is no independently managed electronic system in place to verify the authenticity of these statistics. After delving further into these reporting issues, our team was informed that ad hoc reports compromised of scheduling, registration, and patient accounting information can be run from the Siemens Shared Medical System ("SMS"). When we ran one of these reports, we were able to compile data such as patient days, visits, gross charges, payments, and collection rates by payor. Moreover, we discovered there are discrepancies between the manually submitted Departmental Statistic Report and the information in the Patient Accounting System. The graph below illustrates these discrepancies in inpatient days over the last six months of 2008.



Over the past three months, a new report that details department statistics by nursing stations has been generated to provide daily census numbers. In comparing it with patient accounting data, there may be a revenue cycle issue between the number of patient days reported on the daily census report versus those billed through patient accounting.

The same trend appears in the OCS where there is no way to verify the accuracy of visits reported on the Department Statistical Report. Two reports were run with different identifiers and both reports demonstrated significant discrepancies.

These discrepancies pose a data integrity issue. This issue may be easily explainable and not pose a significant problem, but if a data mining process was in place, someone would investigate and identify the reasons for these discrepancies.

Reports Currently Available - But Not Utilized

Our team also met with the Information Technology ("IT") department and learned that there are over 200 system-generated reports that are automatically updated and readily available through SMS. Our investigation indicated are not utilized because there is a system-wide lack of knowledge of the system and the problems we encountered with data collection.

Additionally, there are some, although not many, ad hoc reports that are requested. It appears potential users of this information understand the system's capabilities but rely on ad hoc reports because they want the information presented in a certain manner.

IT also indicated that they do not have access to the People Soft system. This system contains report writing tools, such as Crystal Reports, that IT could use to generate reports, as requested, and provide useful productivity and Materials Management information.

Finally, A&M discovered that some, but not all, of the individual departments utilize a database system, but that ultimately their database is not integrated into other databases to form a master database.

RECOMMENDATIONS

The Hospital's IT Department should be granted access to all systems that it currently does not have access to.

The best way the Hospital will have to manage the operational and financial condition of the organization is to access all available data. The organization should utilize its IT department to manage data and generate reports. These reports will allow the Hospital's decision makers to better understand the overall condition of the organization.

The Hospital should make better use of the data and reports that can be generated by its current systems and implement a training program designed around teaching administrators how to use and access that information.

The Hospital can make better use of the data and reports available from its current systems. There are over 1000 clinical and financial reports that are generated from SMS and over 2000 reports that can be generate from the People Soft System. The Hospital's IT Department should create a catalogue of these reports, including descriptions and definitions for distribution to department managers and administration for review.

Due to the large number of reports that exist, IT staff members should meet with department mangers and personnel to explain which reports are available and how those reports can be used. These reports can also be customized to meet the needs of the Hospital's administrative and departmental leadership. Training the staff and fostering an understanding of how the information should be used is extremely important.

The CFO, with the assistance of IT, should identify a set of reports for each department head based on a proper time period, daily, weekly, bi-weekly and/or monthly. The department head should receive these reports to review and understand the operational and financial condition of the department.

There are various reports that this organization can utilize to depict the departments and organizational status. Many of these reports are timed, daily, weekly, bi weekly and monthly. These types of reports include but are not limited to:

Name of Report	Daily	Weekly	Bi-Weekly	Monthly
Accounts Receivable by Payor				X
Census By Nursing Station	X			X
Outpatient Visits by Department	X			X
Revenue Reconciliation				X
Daily Cash Receipts	X			
Bad Debt and Adjustment Report	X			X
Billing Exception Reports	X			
Days Not Final Billed (DNFB)				X
Inpatient Census/Days by Payor				X
Outpatient Visits By Payor				X
Gross Revenue and Collections				X
Net Patient Service Revenue				X
Total Revenue and Usage Report		X		X
Patient Revenue and Usage Statistics				X
Hours and Earnings Report			X	
Number of Paid FTEs by Department			X	
Staffing by Nursing Station/Unit	X			
Staffing by Specialty Clinic				
Supplies Utilized vs. Supplies Billed				X
Patient Days vs. Staffing		X		
Outpatient Visits vs. Staffing		X		
Tracking of Process Changes		X		
Patient Satisfaction Data by Unit				
Patient Satisfaction Data by Clinic				
Financial Feasibility of Departments (Revenue & Expenses by Department)				X

It is important for the Hospital to take steps to ensure the authenticity of data in the reports.

The Hospital should implement a DSS to ensure that its Administrative and Department Director leadership are using real time data to make informed decisions.

It is A&M's observation while the Hospital has several data sources and databases, it does not have a system in place to integrate those data sources and databases into one place. A DSS should be implemented to house and integrate all of the Hospital's data sources. The Hospital should be able to implement a DSS quickly given the experience of an IT staff currently at the Hospital who has worked with implementation and management of a DSS.

A DSS, as has been recommended here should be implemented in three phases, with each phase building on the previous so that users can easily acclimate to the system and understand the power of information. The three phases of implementation include:

- **Phase 1** – This is the infrastructure phase. This phase should involve an Interface Engineer who is very technical and takes the host system into DSS. This individual needs no healthcare experience but should be very familiar with how interfaces are built between various information systems. In this phase, building interfaces from and into the system is critical.

- **Phase 2** – This is the decision making process phase. During this phase, users should carefully select the types of data that will go into the database, where that data will come from, and the identifiers for report development.

- **Phase 3** – This is the decision execution and report-writing phases. This phase is a function of the IT department and focuses on the use of real time data stored in the main database to deliver timely and accurate reports to users.

At the conclusion of the three phase build, Administrative leadership and Department Directors can be trained to access data and create reports as needed.

CONCLUSION

Implementation of a DSS is critical for the Hospital to have the information needed to constantly and consistently assess the operational and financial status of the organization. The process for implementation should involve key Administrative personnel, Department Directors, and IT personnel moving from design to operational readiness as quickly as possible. The types of information supported by a DSS will allow Hospital Administrators and Department Directors to make better and more informed decisions.

CONCLUSION

CONCLUSION

It is clear that the Interim LSU Public Hospital has the foundation in place to be a great institution. From the countless number of individuals at all levels of the organization who are passionate about the organization's mission and dedicated to seeing it succeed to the rich history of the organization steeped in overcoming challenges.

However, the effectiveness of the implementation of the recommendations in this Assessment will determine whether the Hospital overcomes the challenges it faces today. This Assessment calls for action across the organization, with each recommendation having the potential of creating significant cost reductions. While this plan is designed to help the organization achieve immediate cost reductions, each change should be implemented understanding the future strategic plans for the Hospital.

To be successful, the culture of the organization must be changed. The organization lacks a broad vision and remains in a post-Katrina reactionary mode. While we are sensitive to the affects of Hurricane Katrina, the organization can no longer afford to linger in the shadows of the past. The organization must move on, accept what it is at this point in time, and make sound fiscal and operational decisions for the future.

We know that change within the organization has historically been difficult and do not anticipate that execution of these recommendations will be easy. Change will have to come from leaders of the organization who have a defined vision for the Hospital's future.

To assist the leaders, the implementation of these recommendations should be focused with a defined process improvement team approach. Each recommendation should be tracked and discussed, goals should be set and leaders must hold individuals accountable for execution of each initiative.

We believe, as is demonstrated by the following chart, that there are significant cost reductions that could be realized by implementing the recommendations in this Assessment.

Total Impact of Alvarez & Marsal Recommendations			
			Productivity Model (excludes $19.6M
Salaries & Benefits	$	26,516,000	of FTE reductions identified below)
Materials Management		704,000	Closure of Warehouse- 20 FTEs
		293,000	Reduce Central Supply Hours- 7.5 FTEs
		278,000	Eliminate Purchasing Agents- 6 FTEs
		30,000	Eliminate Stickers on Supply Item- 1 FTE
		2,000,000	Inventory One Time Reduction
		3,453,800	Supply Value Added Process Strategy
Graduate Medical Education		9,500,000	Transfer Residents/Fellows slots
Other Cost Reductions		5,000,000	Eliminate Purchased Services, Other Operating Costs
Nursing Services		505,000	Reduce Nurse Directors- 5.5 FTEs
		900,500	Reduce Clinical Coordinators - 11 FTEs
		1,342,000	Reduce Nurse Managers- 15 FTEs
		2,749,000	Reduce RN Supervisors- 33 FTEs
		8,000,000	Implement Nurse Staffing Plan
		400,000	Reduce Case Management Staff- 10 FTEs
		2,350,000	Process Improvement Project for ED
Peri-Operative Services		674,300	Increase Room Utilization for 1,750 cases
		577,900	Increase Room Scheduling for 1,500 cases
		750,000	Skill/Staffing Mix
Outpatient Clinic Services		3,100,000	Increase Clinic Medicaid Reimbursement
		1,400,000	Increase Clinic Visits
		981,000	Increase Clinic Inpatient and Surgery Referrals
		1,260,000	Reduce Clinic Staffing & Change Skill Mix
Total Impact	$	72,764,500	
Revenue Enhancement Impact	$	6,733,200	
Cost Reduction Impact	$	66,031,300	

A&M fully appreciates the challenges facing the Interim LSU Public Hospital and its management team. However, A&M believes that it is now time to move away from a "reactionary approach" and adopt a business-oriented, fiscally responsible strategy for providing quality care and training future healthcare professionals.

In closing, A&M is please to submit this Assessment to the Interim LSU Public Hospital. We are fully grateful and appreciative of the time, energy, and support that we have received throughout the completion of this Assessment.

A&M sincerely thanks the LSU Board of Supervisors and the LSU Health Care Services Division for the opportunity to be of service. We look forward to a continued working relationship with the Board and the HCSD and stand ready to assist in the implementation of the recommendations.

APPENDIX

APPENDIX

The following interviews by topic were conducted during the course of this Assessment:

SALARIES & BENEFITS

Colleen Colligan, Chief Financial Officer

Sue Speegle, Comptroller

Susan Cazayoux, Accountant

Latarsha Smith, Budget Director

Don Amor, Accountant, Finance

Pam McVey, RN, Chief Nursing Officer

Daphne Yaun, Director of Human Resources

Geraldine Jones, Human Resource Manager

Rodney Harris, Human Resource Manager

Lien Trinh, Human Resource Specialist, Payroll

MATERIALS MANAGEMENT

Gertrude Ackers, Procurement Director

Robert Arnold, Director of Facilities Management

F. Nick Bacque, Materials Management Analyst

Michael Brooks, Director of Non-Academic OR Services, Materials Management

Mike Carter, Director of Reimbursements

Colleen Colligan, Chief Financial Officer

Clarence Eugene, Manager of Reimbursements

Sharleen Hicks, Procurement Manager

Sherry Lemoine, Materials Management Analyst

Carey Naquin, Director of Medical Supplies

Peter Omorotionmwan, Purchasing Analyst

Mark Robichaux, Financial Reporting Manager

Peter Schneider, Accountant Manager

Martha Smith, RN, Director of Statewide Nursing/Clinical Standardization

Susan Speegle, Comptroller

GRADUATE MEDICAL EDUCATION

Juzar Ali, MD, Medical Director

Mike Carter, Director of Reimbursements

Charles Hilton, MD, Associate Dean for Academic Affairs, LSU University Health Sciences Center School of Medicine

Christopher O'Neil, Contract/Grant Reviewer, Finance Department, Contract Management

Gail Runnebaum, Administrative Director, Medical Staff Services and GME

Jeffrey Wiese, MD, Associate Dean for GME, Tulane University

Michele Zembo, MD, Director of Medical Staff and GME

ADDITIONAL COST REDUCING INITIATIVES

Adler Voltaire, Associate Hospital Administrator

Christopher O'Neil, Contract/Grant Reviewer

Peggy Vicknair, Attorney

Michael Brooks, Director of Materials Management

Ralph Dominick, Director of Housekeeping

Peter Schneider, Accountant Manager

NURSING SERVICES

Lillian Agnelly, RN, RN Manager, Emergency Department

Debra Brown, RN, Associate Nurse Administrator

Colleen Colligan, Chief Financial Officer

John Couk, MD, Emergency Department

Angela Davis-Collins, RN, RN Manager, Labor & Delivery

Ingrid Duffy, RN, RN Manager, House Supervisor

Sequilla Gant, RN, MBA, ANA Ambulatory

Gail Gibson, RN, ANA OB-GYN

Joan Heck, RN, MSN, CNOR, Associate Nursing Administrator, Surgery

Mary Luce, RN, Associate Nurse Administrator

Mary Kelly, RN, Associate Nurse Administrator

Pam McVey, RN, Chief Nursing Officer

Julie Newman, RN, Associate Nurse Administrator

Patrick Reed, RN, Associate Nurse Administrator

PERI-OPERATIVE SERVICES

Adorian Boudreaux-Ancar, Elective Admissions Clinic Satellite/L&T

Christoper Baker, MD, FACS, Chair of Surgery

Colette Blaneq, RN, RN Manager, One Day Surgery/Elective Admission Clinic

Julie Borchers, RN, Nurse Manager, Operating Room

Trina Brinston, RN, RN Supervisor, Board Control

Jay Buras, CRNA, MS, Director, Department of Anesthesia

Lakisha Butler, Posting

Samantha Carr, Procurement

Rudolph Gonzalez, Central Sterile Processing Workflow, Instrument Scanning

Joan Heck, RN, MSN, CNOR, Associate Nursing Administrator, Surgery

Milton Jackson, Administrative Supervisor, Materials Management/Case Cart Assembly

Michelle Molevo, RN, RN Supervisor, One Day Surgery/Elective Admissions Clinic

John Morrison, RN, RN Supervisor (Informatics), Op Record Audit, Charge Processing, Reports

Kelly Nuckley, RN, RN Supervisor, Recovery Room

Thomas Nolan, MD, MBA, Associate Dean, Clinical Affairs Chair of Obstetrics and Gynecology, Operating Room Committee

Janelle Sallean, RN, RN Manager, Recovery Room/Pre-Op Holding/Cath Lab

Celina Wilson, Preference Card Maintenance

OUTPATIENT CLINIC SERVICES

Keith Agnelly, RN, RN Supervisor, Hyperbaric

Juzar Ali, MD, Medical Director

Robert Arnold, Director Facility Management

Melissa Barras, Director, Admitting and Registration

Lynn Beesch, MD, Medical Director of HOP

David Borne, MD, LSU Medicine

Debra Dorsey Brown, RN, Disease Management Liaison

Colleen Colligan, Chief Financial Officer

Vanessa Cousin, RN, RN Supervisor

Carolyn Cousin, RN, RN Program Coordinator

Angela Davis, RN, RN Supervisor OB-GYN

Iris Davis, RN, RN Clinical Coordinator Cardiology

Princess Diner, MD, Tulane Medicine

Sequilla Gant, RN, MBA, ANA Ambulatory

Gail Gibson, RN, ANA OB-GYN

Jennifer Hart, MD, LSU Medicine

Cynthia Holliday, MAP Supervisor

Christine Jones, Patient Service Manager

Dorothy Jones, Supervisor, Inpatient Medical Records

Patricia Kilbert, RN, RN Manager

Chrystal Labranche, RN, RN Supervisor

Art Laporte, Outpatient Radiology Manager

Robert Maupin, MD, OB Service

Angela McLean, MD, LSU Medicine

Pam McVey, RN, Chief Nursing Officer

Georgegette Lang-Min, RN, RN Supervisor, Oncology

Conrad Mornay, Pharmacist Supervisor

Thomas Nolan, MD, MBA, Associate Dean, Clinical Affairs Chair of Obstetrics and Gynecology, Operating Room Committee

Kanna Page, Administrative Intern

Mitchell Perlin, Chief Information Officer

Beth Perriloux, RN, RN Program Coordinator

Patricia Poolson, RN, RN Manager

Judy Smith, Supervisor, Outpatient Medical Records

Gabe Tender, MD, Neurosurgery LSU

Adler Voltaire, Associate Hospital Administrator

Troy Wells, Administrative Coordinator Purchasing

Sheryl Wilson, RN, RN Supervisor, HOP

Daphne Yaun, Human Resource Director

Casandra Youmans, MD, Ambulatory Medical Director

DECISION SUPPORT SYSTEMS

Jaquetta Clemons, Assistant Vice President of Finance

Mikal St. Angelo, Assistant Director, Hospital Information Systems Title

Deborah Castillo, Hospital Information Systems

Laurie Lombard Smith, Director of Policies and Planning

Marie Bastian, Policy Planner